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Natural Resources of

WYOMING

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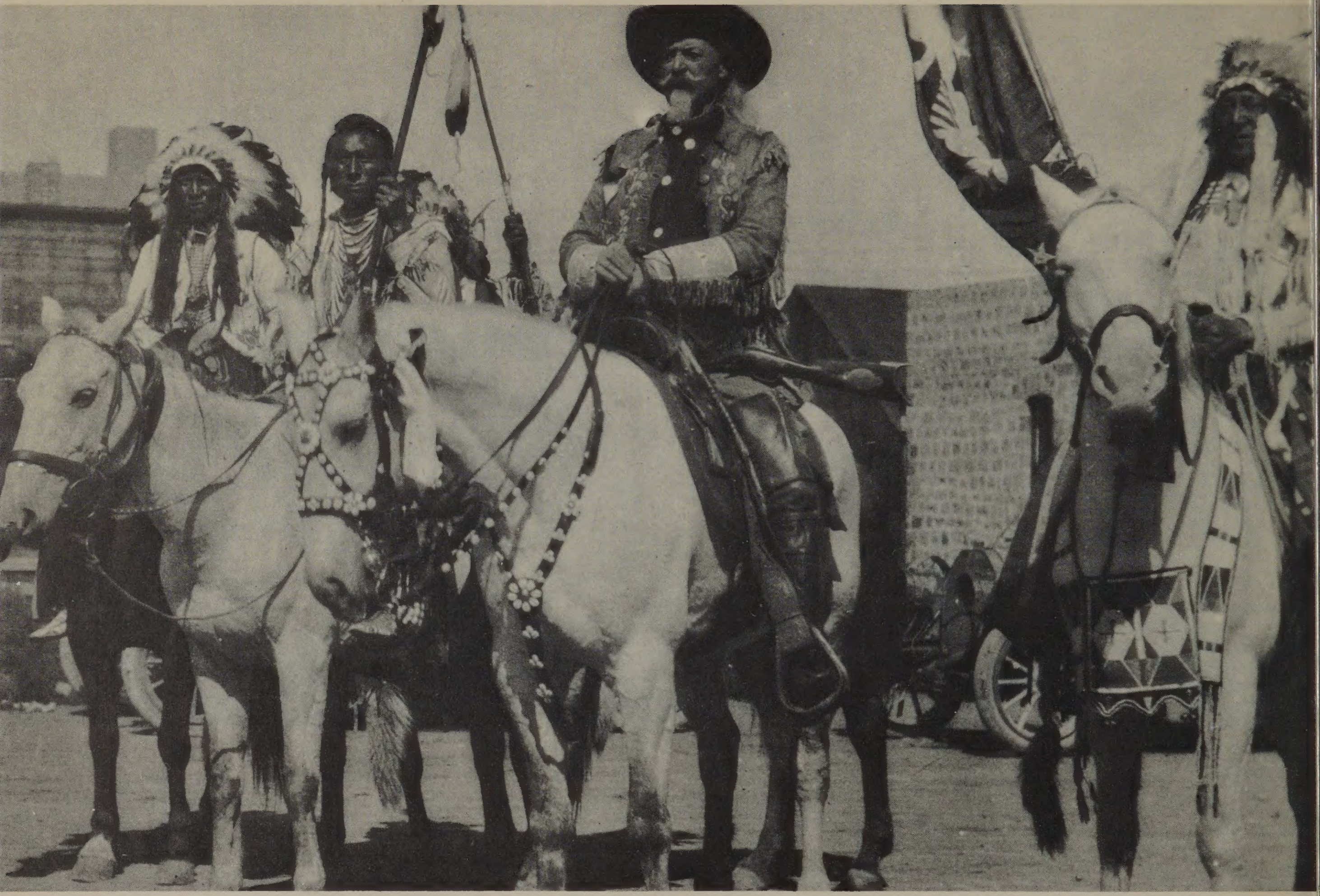


"Buffalo Bill" Cody, with his fringed buckskin and flowing locks and whiskers, is one of the West's most colorful heroes. He has the place of honor during this ceremony in Cody, the town he founded.

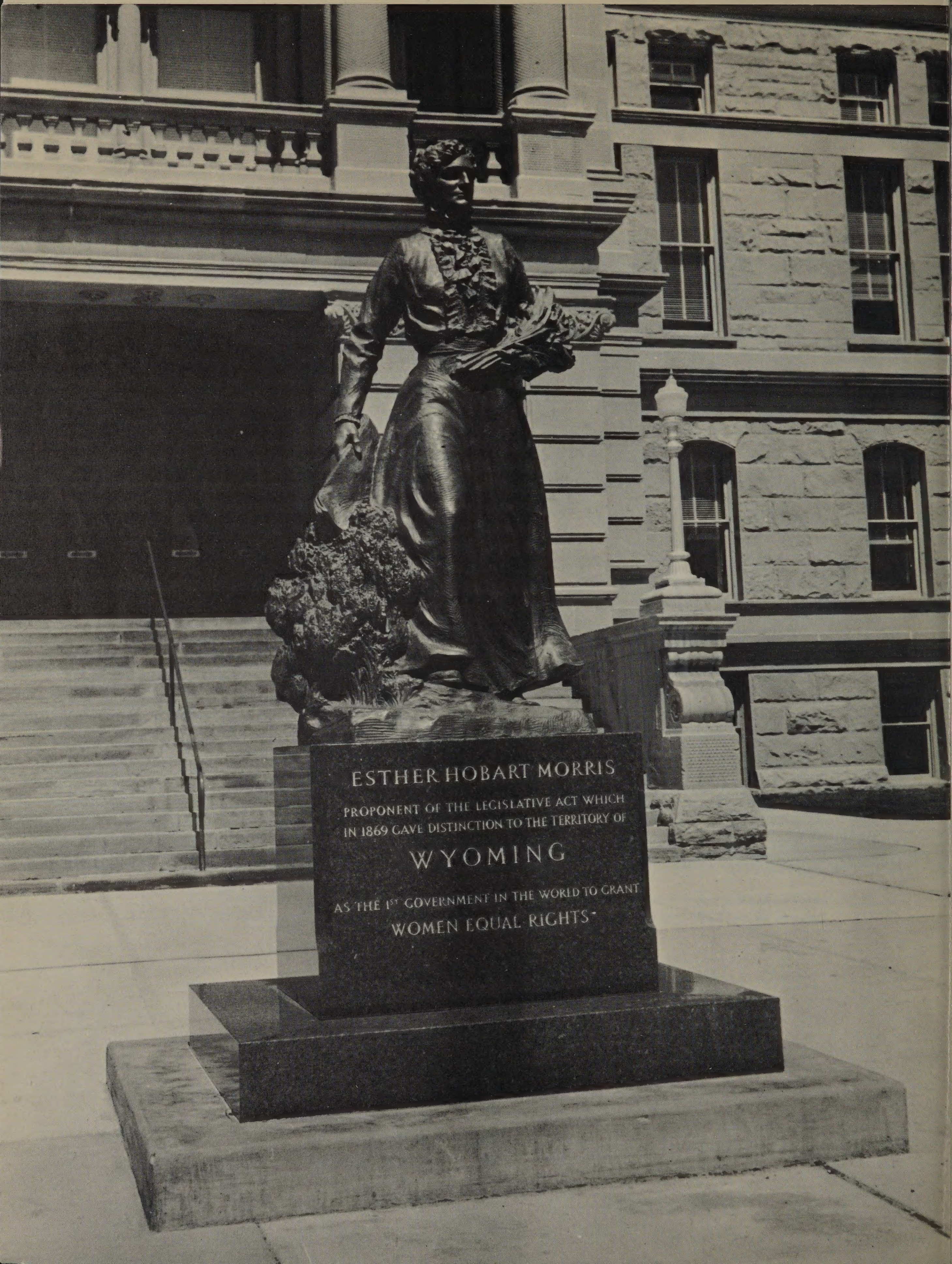
The purpose of this booklet is to bring a new awareness on the part of the American people of our rich natural resource heritage, its history, its present, and its future. To know our land is to love it and cherish it and protect it from the ravages both of nature and man.

Stewart L Udall

Secretary of the Interior.

Contents

Page
5 "End of the Plains"
13 Physical Characteristics
27 Water and Power
35 Mineral Resources
39 Land as a Resource
45 Fish and Wildlife
49 Indians and Their Resources
53 Outdoor Recreation
63 Programs of Federal Natural Resource Agencies
64 Fish and Wildlife Service
65 Bureau of Land Management
66 Bureau of Indian Affairs
68 Bureau of Mines
70 Office of Minerals Exploration
70 National Park Service
71 Bureau of Outdoor Recreation
71 Bureau of Reclamation
74 Geological Survey
75 U.S. Forest Service
76 U.S. Army Corps of Engineers
77 Federal Water Pollution Control Administration
78 Soil Conservation Service
79 The Future
80 Acknowledgments


ESTHER HOBART MORRIS
PROPONENT OF THE LEGISLATIVE ACT WHICH IN 1869 GAVE DISTINCTION TO THE TERRITORY OF
WYOMING
AS THE 1ST GOVERNMENT IN THE WORLD TO GRANT
WOMEN EQUAL RIGHTS

"End of the Plains"

"Wyoming," a name derived from two Delaware Indian words, meant "at the big flats" to the Indians, but was translated by the early settlers as "end of the plains" or "mountains and plains alternating." Today, Wyoming is still all of these—a land of rugged mountains, great open spaces, and far horizons. In many respects, it remains a frontier land—resplendent in untouched wilderness, unmarred beauty, and untapped resources. At the same time it is a modern State—conscientiously developing its rich mineral, land, and water resources. Throughout Wyoming's history, its growth has been stimulated by the discovery and development of the valuable natural resources—that are found at the "end of the plains."

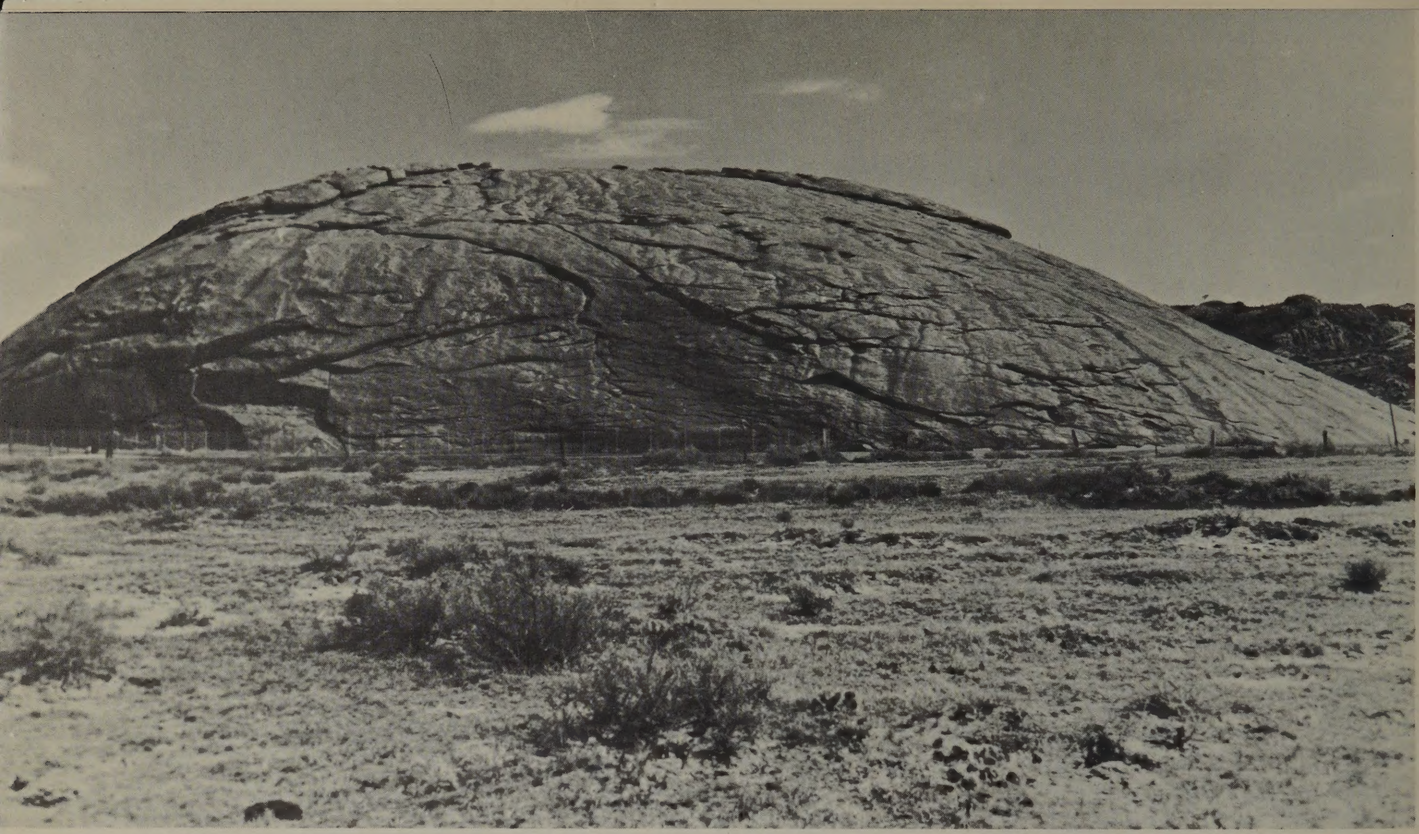
Into this bold land of lofty mountain peaks and undulating plains came a succession of explorers, fur traders, prospectors, pioneer settlers, and ranchers. While the earliest of them were lured, perhaps, by the whisper of the unexplored, their numbers grew as the rich promise of this new country became apparent. At the end of the plains, frontiersmen saw stretches of lush grass, great herds of buffalo and antelope, thick forests, streams resplendent with trout, and beaver scurrying along river banks. The Indians of the region knew the blessings of the land before the white man. Small wonder that they fought to guard its wealth.

Wyoming is the only State comprising land from all four principal annexations to the original United States—the Louisiana Purchase, and the Texas, Oregon, and Mexican Cessions. Parts of the State have been claimed at times by 5 nations and some 30 boundary changes have resulted in Wyoming's present rectangular shape.

Opening the Plains

The search for fur-bearing animals, abundant in the Wyoming wilderness, brought the first explorers into the region. Although, in 1743, the French Canadians, Francois and Louis Joseph Verendrye, may have sighted the towering Big Horn Mountains in what is now Wyoming, a trapper is credited with the first extensive exploration of the region. In 1807 John Colter, after his travels with the Lewis and Clark Expedition, set out to trap in the Wyoming wilderness.

Colter's trapping journeys, which marked the start of an era of fur trading in Wyoming, provided the first knowledge of the area for people in the East. Captain Clark indicated Colter's route on the map published by the expedition. Colter was the first U.S. citizen



Popularly known as the Register of the Desert, Independence Rock is one of the great natural monuments on the Oregon Trail. The number of inscriptions on the huge rock has been estimated to be between 40 and 50 thousand.

to see the Teton Mountains, Jackson Hole, and Teton Basin; the first to explore the Big Horn River, and the first to gaze at the wonders now preserved in Yellowstone National Park. His stories of spouting geysers and burning mountains were generally disbelieved until verified 60 years later by other adventurers.

Between 1807 and 1840, trappers and mountain men combed the valleys for beaver. Names and deeds of many of these men are closely associated with Wyoming history. General William Ashley—who established the colorful trading rendezvous on Henery's Fork of the Green River—followed what later became the Oregon Trail, and crossing South Pass, showed there was a natural gateway through the Rocky Mountains. Ashley's route was taken later by Captain Bonneville, proving that wagons could cross South Pass. Robert Campbell and William Sublette built the first permanent fur-trading post in Wyoming, Fort Laramie, which stands partially restored today. Fort Bridger, built by James Bridger in 1842, was the second permanent settlement and later a center of Mormon activity.

When the fur trade ebbed in the 1840's, Wyoming had been successfully opened by trappers for the influx from the East. Trappers had found the best overland trails, mountain passes, and landmarks, and set up the trading posts that later served as way stations. As the westward movement began, many mountain men left their traps to become scouts or guides for the wagon trains.

A steady stream of emigrants crossed Wyoming on the Oregon, Mormon, and California trails. Some sought California gold; others, Oregon land. Some found all they wanted in Wyoming. They paused at Fort Laramie, inscribed names and dates in sandstone cliffs, and left reminders—a grave, a broken wheel—of the hardships they encountered. Natural formations became signposts along the trails and names such as Pilot Butte and Independence Rock still speak today of the paths these travelers took long ago.

Trappers and mountain men once combed Wyoming's valleys for beaver and settlements grew up along the rivers. Today, this area at the head of the Wind River Valley is known for its extensive cattle, timber, and dude ranching operations.

Jim Baker's Cabin, unique for its day because of the second story, commemorates its former owner, an illustrious trapper, scout, and guide. Located in Frontier Park, Cheyenne, the cabin has served as a fort, home, and trading post.

Conservation First

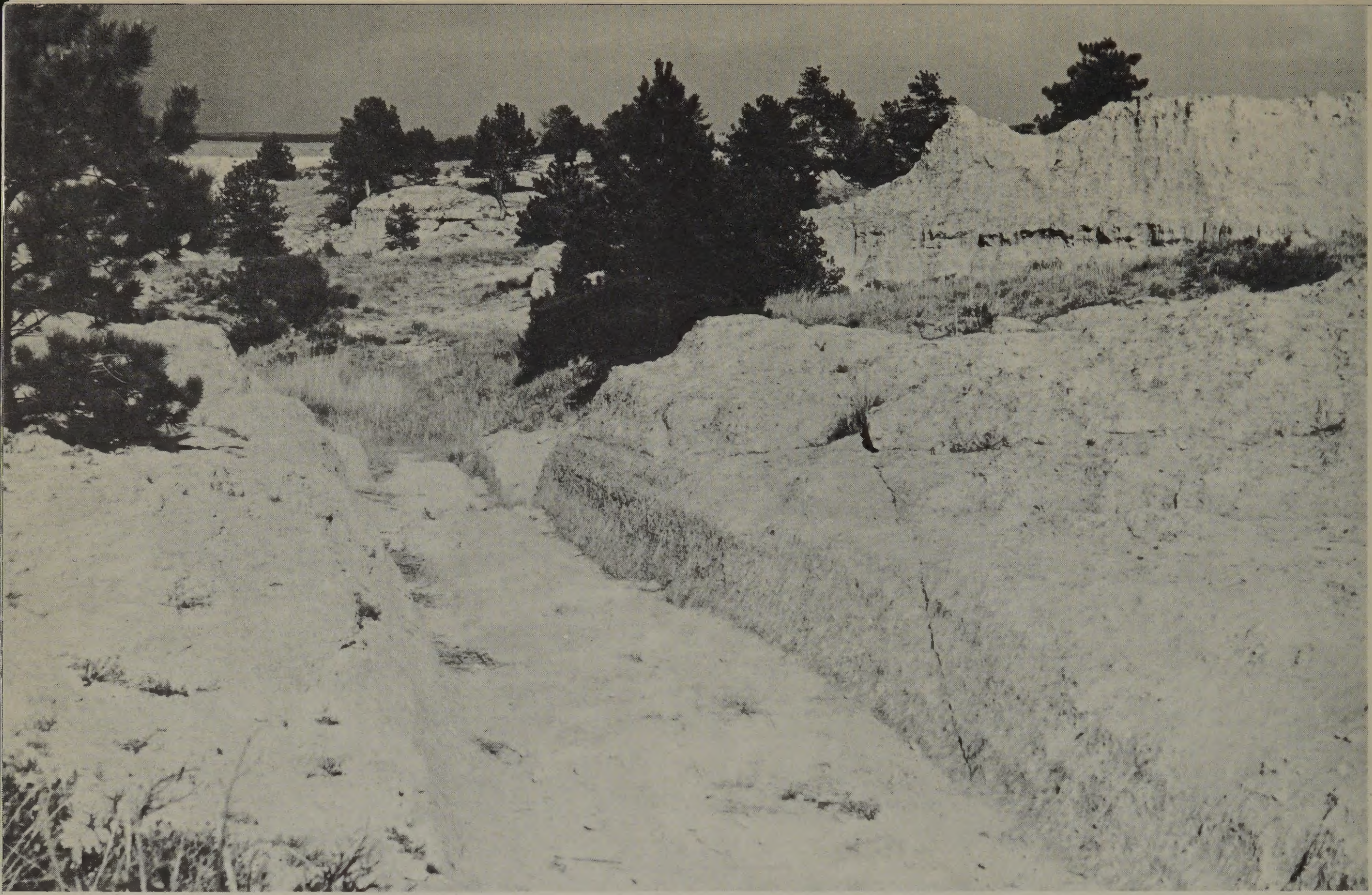
Scientific expeditions also followed the trails. One of these penetrated the Yellowstone region. Like John Colter, members of the party were astonished by the spectacles they saw, and their reports led to the Yellowstone Expedition of 1870. In 1872 Congress established the first national park to assure that the natural marvels of Yellowstone would remain undisturbed for future generations. This conservation "Milestone" was followed by others—establishment of the first national forest reserve in 1903 and the first national monument in 1906.

Other resources captured the attention of the public—sometimes dramatically as in the gold stampede to South Pass in 1867, sometimes quietly as pioneers discovered that Wyoming range grasses offered excellent grazing for cattle and sheep. Great coal deposits, today one of the Nation's foremost reserves, were found in the southwestern corner of Wyoming and the towns of Rock Springs, Green River, and Evanston were born. Thus the people came to Wyoming.

Warily the Indians watched the settlers come, watched the houses and fences built, the game killed, the timber cut. Then they lashed out and years of harassment began. Troops stationed in the region engaged in numerous skirmishes with the Indians. Several massacres and retaliations on both sides occurred before peace treaties were signed.

Wyoming Territory

By 1868, the Union Pacific Railroad had pushed its way across the southern part of Wyoming and settlement of Cheyenne, first railway terminal in the State, had begun. The growing population demanded organized government, and in 1868 the Territory of Wyoming was created. In 1869 Governor John A. Campbell convened the first territorial legislature



The ruts of prairie schooners lie as a haunting reminder of the hardy pioneers who traveled this way more than a century ago. Their wagon wheels are indelibly stamped on the limestone plain just 2 miles south of Guernsey.

which made history by granting equal rights to women.

In the land of the cowboy, women now served on juries and, for the first time, a woman was appointed justice of the peace. Later, other Wyoming women took the offices of mayor, secretary of state, State senator, and even Governor. After Wyoming became the 44th State in 1890 its motto, appropriately enough, was "Equal Rights" and one of its nicknames "Equality State."

The lumber, mining, and railroad industries started early in the new territory but cattle—the bonanza business—fattened on the plains. Texas cattlemen, learning of the great ranges to the north, began driving their herds to Wyoming. Following what became known as the Texas Trail or Long Trail, thousands of cattle poured into Wyoming and the era of the cowboy was in full swing. Cattlemen began to carve vast empires out of the open range until several drastic winters, the growth of the sheep industry, and increased homesteading checked their ambitions.

Irrigation enabled farming, with crops best suited for livestock feeding, to take its place alongside ranching. The cattle industry settled down to fenced pastures, grazing on public lands, and range management practices that assured its steady growth into one of Wyoming's major economic activities today.

Statehood

By the time Wyoming was admitted to the Union in 1890, the population had increased from 9,000 to 63,000, a jump of 700 percent since 1870. Agricultural activities spread to every corner of the State. Where the land was parched, the State and Federal Governments worked together to reclaim it with water from huge storage projects. A full-scale oil boom occurred near Casper in 1912 and today Wyoming is one of the Nation's major petroleum producers. In addition to coal and oil, Wyoming was found to have other valuable minerals, including uranium. A more recent industry—tourism—

has developed from the scenic assets of "mountains and plains alternating," offering two national parks, many historic sites, excellent hunting and fishing, and a wealth of outdoor recreational opportunities.

With discovery and settlement some of the Wyoming scene has changed, but space—relished by the Indian, the trapper, and the settler—still characterizes the State. If the State's 330,000 inhabitants were evenly distributed over the great plains of Wyoming, only 3 people would be found on each square mile. As it is, only the capital, Cheyenne, and Casper have more than 20,000 inhabitants. One-third of the population lives on ranches while two-thirds live in Wyoming's 275 towns and villages, many of which are separated by as much as 50 miles. Among the State's small but thriving cities are Laramie, Sheridan, Rock Springs, Evanston, Lander, Casper, Cheyenne, and Green River.

Wyoming residents have fostered education and cultural development. The Territorial Legislature established the University of Wyoming in 1886 and now more than 100 programs of study are offered by its 8 colleges. The State also has five community or junior colleges.

Wyoming Today

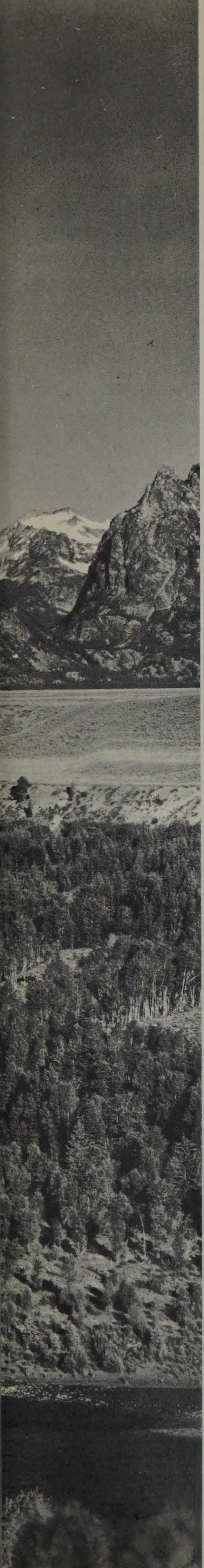
In its growth Wyoming has blended the Old West with the new. The color of the past is preserved in historical sites, captured in rodeos and pageants, and reflected in the jaunty tilt of a rancher's hat. Cowpunchers still ride the range while helicopters hover overhead to spot stray cows. Modern irrigation structures transform once arid land into productive pasture and cropland, and the lights of industry are warm beacons on the once empty and forbidding plains.

The past presses in closely upon the present where ruts left by the wheels of pioneer wagons still scar the earth near an open-pit coal mine, a long-abandoned stagecoach station stands in sight of an oil derrick, and the logs of an ancient fur press can be seen from a popular camping area. The peaks that guided pioneers look down today on wide superhighways.

Proud of its past, "Wonderful Wyoming" keeps step with the present. Conscious of the responsibility imposed by their wealth of natural resources, the people of Wyoming work diligently to forge a future as big, bold, and beautiful as the land itself.

The past echoes through South Pass City, where gold seekers and west bound settlers once traveled the Oregon Trail and Ester Hobart Morris began her outstanding campaign for the right to vote.

Cheyenne, the capital and Wyoming's largest city, was once a booming railroad town. Each year tribute is paid to "Frontier Days" with a week-long festival of parades, rodeos, and dancing in the streets.



Wyoming is big country—vast streches of river, valleys, and plains rimmed by the majestic Tetons cover the northwest.

Physical Characteristics

In Wyoming, the land reaches out to the sky. Riding just below the crest of the Rocky Mountains, Wyoming is the second highest State in the Union with an average elevation of about 6,700 feet above sea level, exceeded only by Colorado at 6,800 feet. Ninth in size, the rectangular State encompasses nearly 98,000 square miles—over 62 million acres—bounded by Montana, South Dakota, Nebraska, Colorado, Utah, and Idaho.

Wyoming's geography boasts high prairies and plateaus, rugged mountain ranges, abrupt buttes, sheer summits, pleasant valleys, and rolling hills. The Great Plains, Wyoming's outstanding topographic feature, extend westward from Nebraska and the Dakotas over about one-third of the State. Thus, the eastern section of the State, except for the dome-shaped, heavily wooded Black Hills in the northeast corner, is a vast, grass-covered tableland interrupted here and there by deeply dissected badlands, hogback ridges, erosion buttes, and broad stream valleys. The extraordinary Devil's Tower, a National Monument, is a volcanic plug visible for many miles as it juts from the plains in the northeastern part of the State.

Mountain Ranges

The plains terminate abruptly against the foothills of the Laramie Mountains to the southeast and against the Big Horn Mountains rising in the north-central part of the State. The boundary line between plains and mountains is less distinct in the north, where the Great Plains merge almost imperceptibly with prairies that lie between the Black Hills and the Big Horn Mountains.

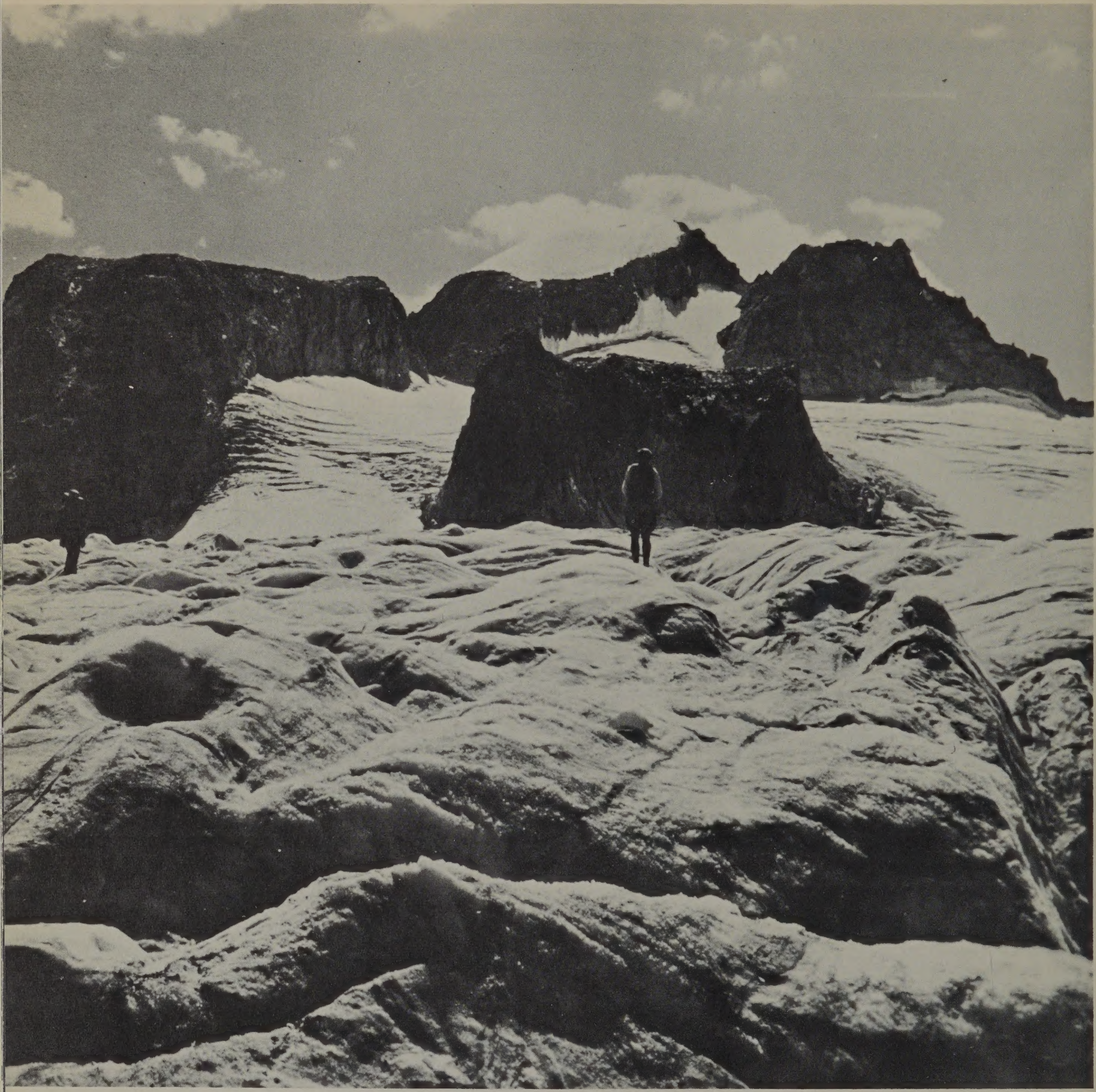
West of the plains country, great isolated mountain masses separated by broad basins dominate Wyoming's landscape. Basins such as the Big Horn, Wind River, Great Divide, and Green River are vast prairie lands stretching over thousands of square miles, broken only by sudden buttes and mesas. A few basins are virtually surrounded by mountains, but most are open, affording ready access by highways and railroads from most parts of the State. Wyoming's mountains are among the highest and most picturesque of the Rocky Mountain chain. The three-pronged Laramie, Medicine Bow, and Sierra Madre ranges in the south; the massive Big Horns in the north; the lofty Wind River Mountains in the west; and the majestic Tetons in the northwest give the State many vistas of rugged grandeur.

The Big Horns, among the State's largest and most beautiful ranges, stand like a giant wall with more than a dozen snowy peaks varying from 9,000 to over 13,000 feet in height. Many streams have their source in this range and lakes of all sizes are scattered along the eastern slope. The Absaroka Mountains along the east and southeast edges of Yellowstone National Park rise in sheer, spectacular cliffs thousands of feet above bordering basins. The peaks of the Absaroka, Wind River, Teton, and Gros Ventre ranges—all in northwest Wyoming—are crowned perpetually with glacier-forming snows. Gannett Peak, 13,785 feet in altitude, is part of the Wind River range and the highest point in Wyoming.

The Continental Divide, the lofty backbone of the Rocky Mountains, swings along a series of ranges through Wyoming from the northwest to the center of the State's southern boundary. The Red Desert, named for the color of its soil, forms a break in the Divide. A vast, high plateau, the dry, treeless area is an important wintering range for sheep and wildlife.

In the lee of the Grand Tetons, Jackson Lake mirrors the beauty of the surrounding landscape.

A living glacier is visible from the summit of Mount Moran in Grand Teton National Park.



Dinwoody Glacier, located in one of the most rugged wilderness areas in Wyoming near Gannett Peak, stands at an elevation of 13,785 feet.

Wyoming's Rivers

Many of the major river systems of the country have their sources in that great upland region that lies astride the Continental Divide in northwestern Wyoming. Here are the headwaters of the Green River, which flows southward into the Colorado River; the Snake River, flowing westward into the Columbia River; and the Yellowstone, Madison, Gallatin, and many lesser rivers, flowing northward and eastward into the Missouri River.

East of the Divide, Wyoming's rivers drain in an easterly direction. West of the Divide, almost all of the rivers drain to the south. At some point nearly every one of the larger rivers cuts a deep, spectacular canyon through one of the bordering mountain ranges, and many have referred to Wyoming as the "place where rivers run uphill." In the eastern part of the State the Cheyenne, Belle Fourche, and North Platte Rivers provide the main drainage.

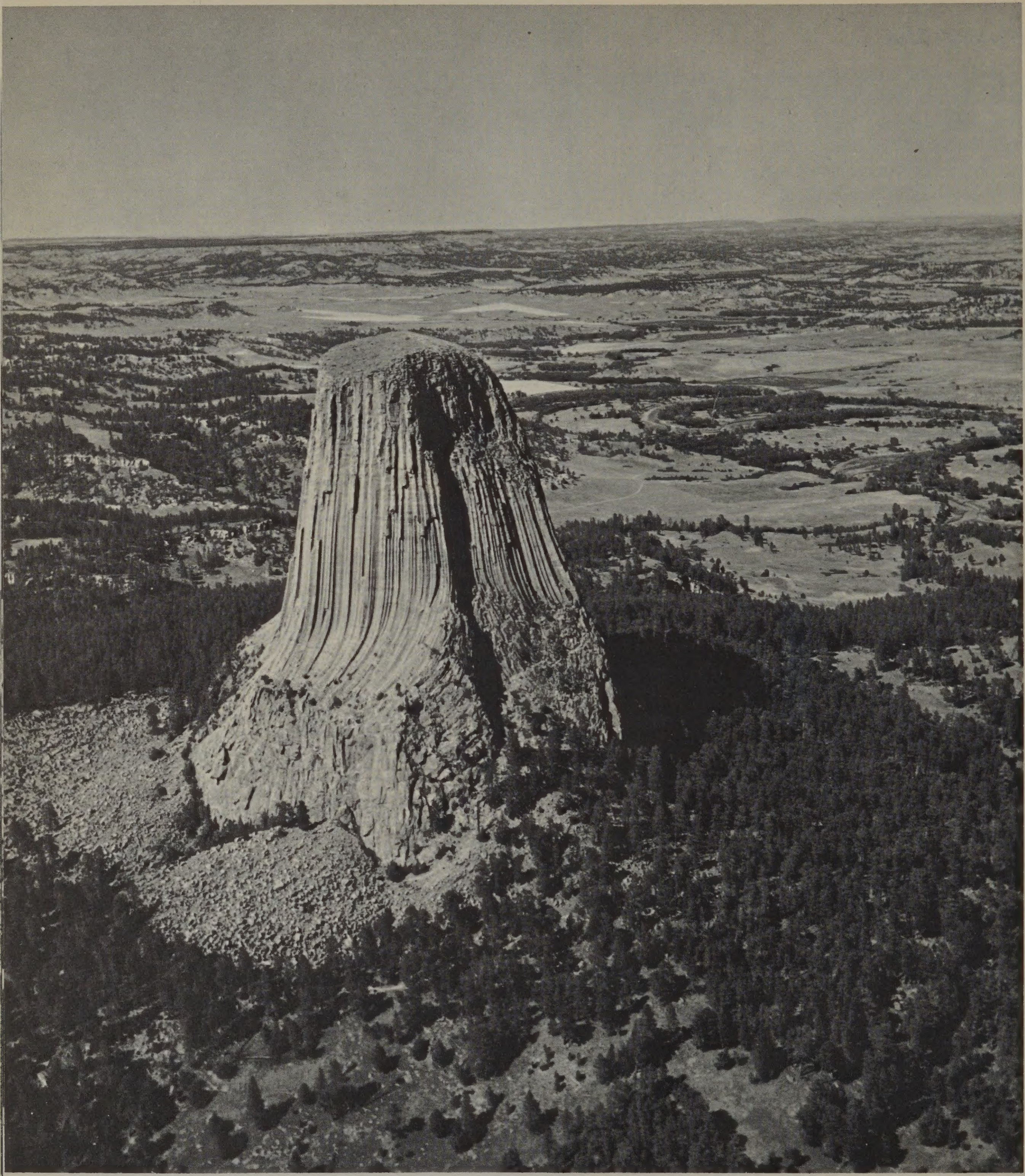
The Snake River, one of Wyoming's longest rivers, winds through the foothills of the Tetons, gracefully bending with the mountainous contours and cutting deep canyons.

Geologic History

In its mountains and plateaus, Wyoming holds the evidence of a billion years of geologic change; the advances and retreats of the sea, the birth and destruction of mountain ranges, and outbursts of volcanoes. Rocks representing the last half billion years are now exposed along mountain flanks and across basins, affording exceptional opportunities to see a great variety of geologic phenomena. Through abundant and varied fossils preserved in these rocks the course of evolution can be traced. Various formations also hold Wyoming's resource wealth of coal, oil, trona, and bentonite formed as the earth changed.

Geologists travel from all over the world to study the Wyoming mountains. They study how the Rockies were formed; they marvel at the massive upheaval which thrust up the earth's crust to form the Teton Range. They dig up remains of prehistoric life—trilobites, fossil fish, and dinosaurs—from the plains and foothills. The hundreds of geysers, mud springs and mineral springs in Yellowstone National Park are closing phases of volcanic action; Obsidian Cliff, a glass mountain in the park, was made when hot lava pouring from a volcano was chilled so suddenly that glass resulted.

The earth still reveals its wound where one of the worst slides on record sent 50 million tons of debris thundering down Sheep Mountain, damming the Gros Ventre River.



Devil's Tower, rising 1,280 feet above the Belle Fourche River, is one of America's oldest geological formations. It took shape millions of years ago when molten rock, forced up from below, cooled near the surface.

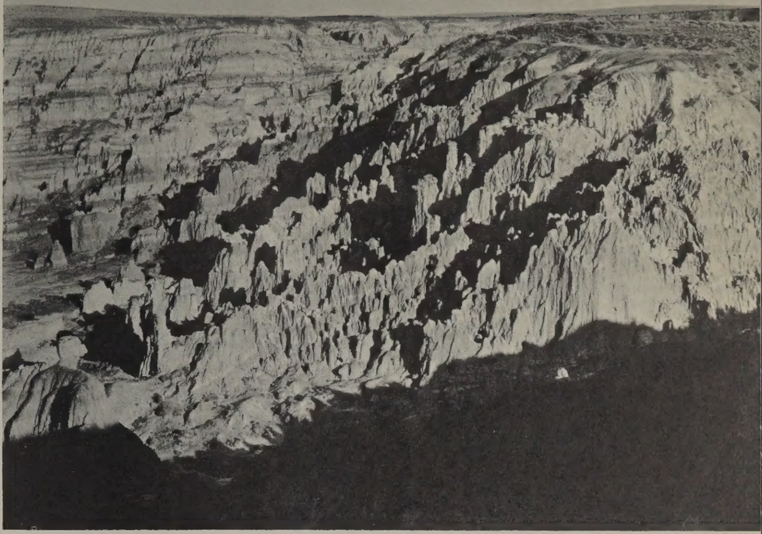
Forming the Earth

The oldest rocks known in Wyoming originated largely as a thick series of sediments—sand, shale, clay, and limey mud or ooze—deposited by water upon an unknown crust. These sediments were first hardened into sandstone, shale, and limestone rocks and later were transformed, through profound physical and chemical changes, into the crystalline gneiss, schist, quartzite, and marble now visible in the cores of many of the mountain ranges. Still later, these formations were split by molten rock that hardened, mostly to granite. Over hundreds of millions of years, the whole mass of then-existing mountains was repeatedly deformed and eroded by streams and ocean waves until the relief was planed to a very flat surface.

For about 500 million years shallow seas moved back and forth across Wyoming. Rocks formed during the first half of this period bear fossil remains of small ocean-dwelling animals. Trapped in later rocks are the fossils of land- and sea-dwelling reptiles, such as the giant dinosaurs.

Finally, the sea retreated, never to return, and a great slow wave of mountain building began to create the Rocky Mountains and outline the landscape of today. From deep within the earth, giant forces, the mechanics of which are still not completely understood, caused the earth's crust to slowly buckle, fold, and break. Parts of Wyoming were lifted to form mountains, while other areas were depressed into basins. At the climax of this mountain building, parts of the crust were ruptured along tremendous horizontal cracks and some of the mountain blocks were literally thrust along them over the margins of the adjacent basins. These dynamic events, affecting a large region and spanning a period of 25 to 30 million years, have become known as the Laramide Revolution because of the evidence preserved in geological features in southeastern Wyoming.

As soon as the mountains began to form they were attacked by erosion. Debris from this erosion and from volcanic action, particularly in northwest Wyoming, was carried by streams and wind into adjacent subsiding lowlands.



Hell's Half Acre is filled with weird shapes and huge towers wrought by erosion. The eastern section, known as "Devil's Kitchen," has been made into a park where foot trails wind among the fantastic depressions.

Evidence of a time, millions of years ago, when the sea moved back and across Wyoming is preserved in the shape of the land today. Below is a sea bed which contains fossils of small, ocean-dwelling animals.

Steamboat Rock, formerly a forest fire look-out station, is a unique abutment that rises in gigantic proportions from the east slope of the Big Horn Mountains. The rugged beauty of the area is preserved much as the Indian once knew it.

The lowlands, filling at about the same rate as they subsided, remained close to sea level; at times, they held extensive lakes. Subtropical floras flourished then, and hordes of mammals—ancestral camels, horses, rhinoceroses, and many others—roamed the grasslands. Gradually the mountains were worn down and the basins filled with sediments until a time, perhaps 10 million years ago, when the landscape had been reduced to a vast, almost featureless plain dotted by a few hills in places where the highest mountains stand today. On this plain, river systems were established that still exist.

Then the entire region was uplifted 3,000 to 4,000 feet above its previous level and the last great cycle of erosion began. As the streams bit deeper and deeper into the sediment-filled basins and carried the debris out of the State and toward the sea, they eventually encountered the buried portions of the mountain chains. Some of the streams were diverted into wide curving courses; others cut straight down and across the mountains, producing spectacular gorges such as the Yellowstone, Wind, and Snake River Canyons. Many of Wyoming's present mountains are those of 50 million years ago which have been largely exhumed and again stand boldly above the flanking basins.

Only a few thousand years ago broad glaciers formed in the higher mountain ranges of Wyoming. Few moving glaciers are left, but many permanent ice fields still exist in many of the higher mountains.

Climate Conditions

It has been said that the "worst thing about Wyoming's weather is its reputation." To an out-of-Stater, Wyoming generally brings to mind a picture of blizzards, deep snowdrifts, and extreme cold. The U.S. Weather Bureau, however, places Wyoming in the "comfort zone" because its combination of cool weather and low humidity provides a temperate and comfortable climate.

Wyoming ranks among the leaders in the sunshine States. Because of its elevation the State has a relatively cool climate and clear invigorating air. The dry air tempers both the heat of summer and the cold of winter.

The temperature averages about 42° but varies widely in different sections of the State. Mountains and high valleys are cooler, with average

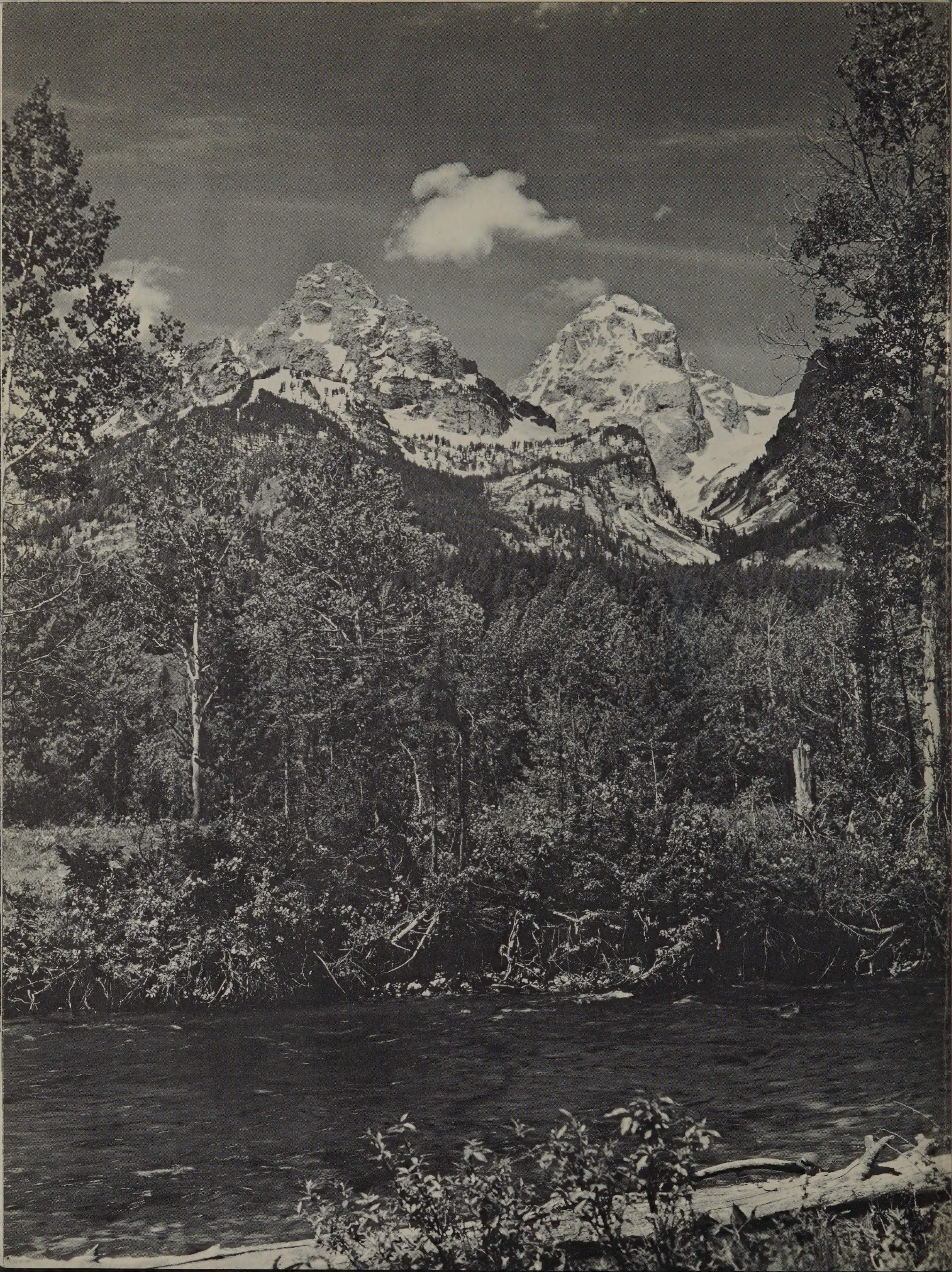
A petrified tree found near Buffalo is yet another testimonial of life on earth millions of years ago.

summer highs about 70° and lows of 30°. For most of the State average summer temperatures are in the 80°'s. January and February are the coldest months with low temperatures running about 5° to 15°. In winter it is characteristic to have rapid changes between mild and cold spells. But since snow does not usually accompany cold waves the cold weather is not severe. Snow falls frequently from November through May with the heaviest falls in the mountains.

Wind combined with snow can create treacherous blizzards in Wyoming; but the helpful "chinook"—the warm winds that melt the snows—make grazing possible even in winter. Snowfall is usually light to moderate in lower elevations, but may pile into huge drifts when accompanied by strong winds.

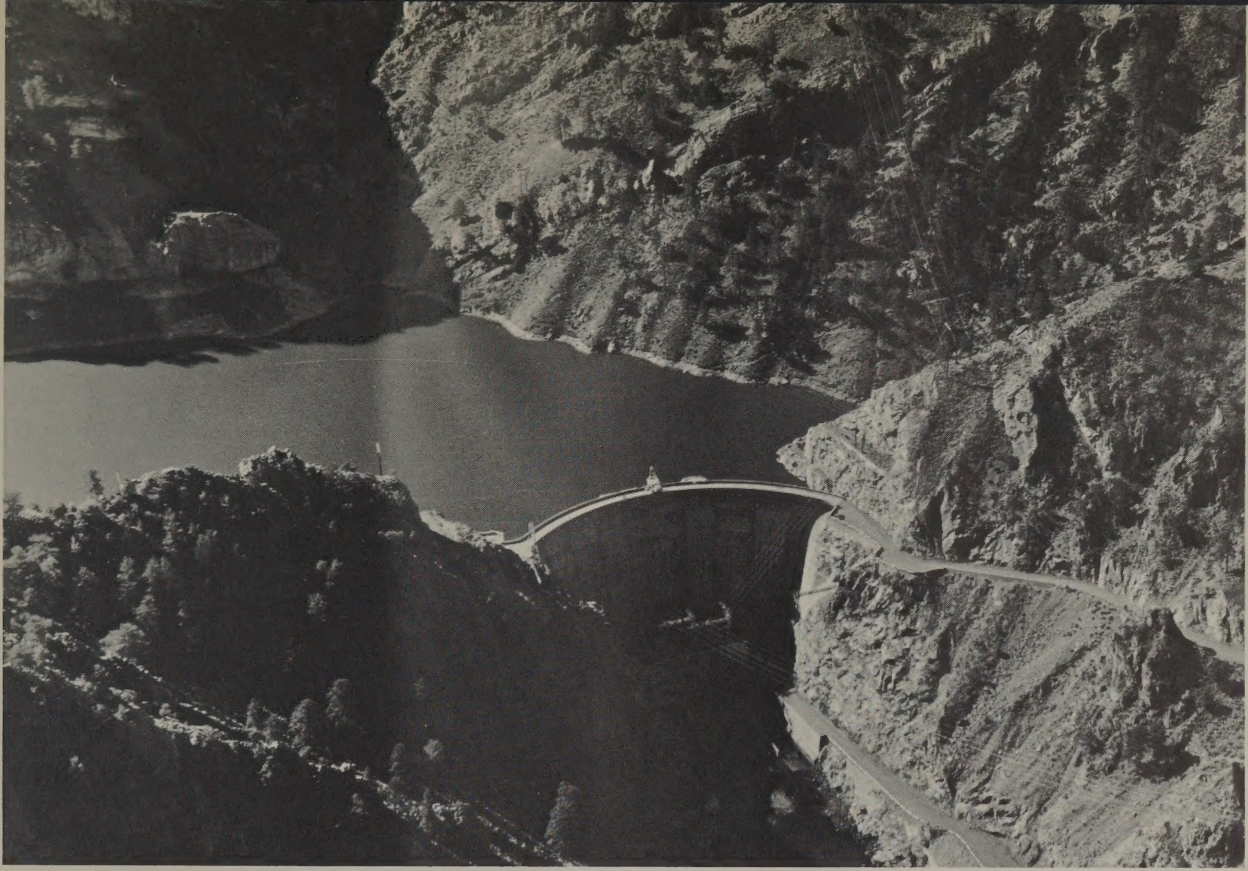
When Wyoming people talk about weather, conversation invariably turns to the subject of precipitation. To the rancher and farmer, rain and snow are of vital concern in a State which receives less than half the national average of precipitation. Although Wyoming's average annual precipitation is about 15 inches, the amount of moisture varies considerably in different parts of the State. While about 35 inches of precipitation is recorded annually in the mountainous northwest, about 7 inches falls in the lower portion of the Big Horn Basin, and the Red Desert. Snow in the mountains is one of the best means of storing moisture in Wyoming, and deep snows there mean more water for irrigation in the lower areas. Higher elevations, however, do not necessarily receive more precipitation. The southwest part of the State, for example, is a plateau surrounded by mountains and receives about 7 to 10 inches annually, while the northeast, at a lower elevation, receives as much as 16 inches.

Although they are perpetually topped with glacier-forming snows, the Tetons are a magnificent sight blanketed in white during the winter months. Visitors have already discovered the possibilities for Alpine-type skiing and have turned Wyoming's tourist season into an all-year affair.



Jenny Lake in Grand Teton National Park is a favorite spot with sportmen and nature lovers alike. At the lake, a museum houses an unusual mountaineering collection, along with exhibits of the region's geology, history, and flora and fauna.

Wyoming's developed and undeveloped water resources are among the most extensive in the United States. Much of the water for the main tributaries of the Columbia, Colorado, and Mississippi Rivers is provided by smaller rivers.



The waters of the North Platte River that flow through this rugged section of Wyoming are utilized first by the Seminoe Dam, shown here, then by Kortes and Pathfinder Dams not far downstream.

Water and Power

Where there is water the land supports valuable crops and forage, towns grow into cities, power generation feeds industry and homes, and recreation flourishes.

There is water in Wyoming—so much that with development of underground stores and wise husbandry of surface supplies, Wyoming's water resources could meet the industrial, agricultural, and personal needs of 20 million people. At present, however, areas in the State suffer water shortages. Despite Wyoming's tremendous water endowment it is not always where it is needed, when it is needed.

Four of the major drainage basins of the United States have their headwaters in Wyoming and three principal river systems originate in the State. Less than 1 million acre-feet of water enters Wyoming as contrasted to some 13 million acre-feet of depleted flow leaving the State. In western Wyoming the Salt, Greys, Hoback, Gros Ventre, and many lesser streams join the Snake—most important of the State's rivers—and eventually drain into the great Columbia. The Green and Little Snake Rivers in southwestern Wyoming are headwaters of the Colorado River. The Bear River in the southwestern quarter of Wyoming, which ambles back and forth four times across the State's boundary, supplies the Great Salt Lake in Utah. Rivers of the remaining three-fourths of the State contribute to the Missouri and Mississippi Rivers and their total contribution exceeds that of the Snake River system. Principal streams are the Yellowstone and its tributaries, the Clarks Fork, Big Horn, Tongue, and Powder Rivers in the northwest; Little Missouri and Belle Fourche

Rivers in the northeast; Cheyenne and Niobrara Rivers in the east-central part of the State, and the North Platte River in the southeast region.

Water Availability

With abundant water resources now, Wyoming is also assured adequate supplies for increased future needs. The State presently uses only about 10 percent of its water. Wyoming's right to use portions of the remainder has been established by Supreme Court decrees and interstate compacts. Plenty of room and plenty of water invite industrial, municipal, and agricultural growth.

With such plentiful water resources, why do some areas of the State suffer shortages? An important factor is uneven distribution of moisture in various parts of the State. In some sections where the soil is suited for agriculture, precipitation and streamflow is inadequate, whereas many of Wyoming's larger rivers, such as the Yellowstone, Clarks Fork, Tongue, and Powder, course through deep, precipitous canyons. Limited rainfall and wasted runoff water from the mountains sometimes account for low stream levels at times of the year when water is needed, particularly by farmers.

The State's primary source of streamflow is melted snow from high mountain ranges. Storage of this water in reservoirs, for release as needed for irrigation and other purposes, is vital to the State's economy. Although several of Wyoming's rivers have dependable streamflow, adequate storage during peak flows of "snowmelt" assures continued water supply during months of little precipitation. More river development projects are needed to insure ready availability of water throughout the State.

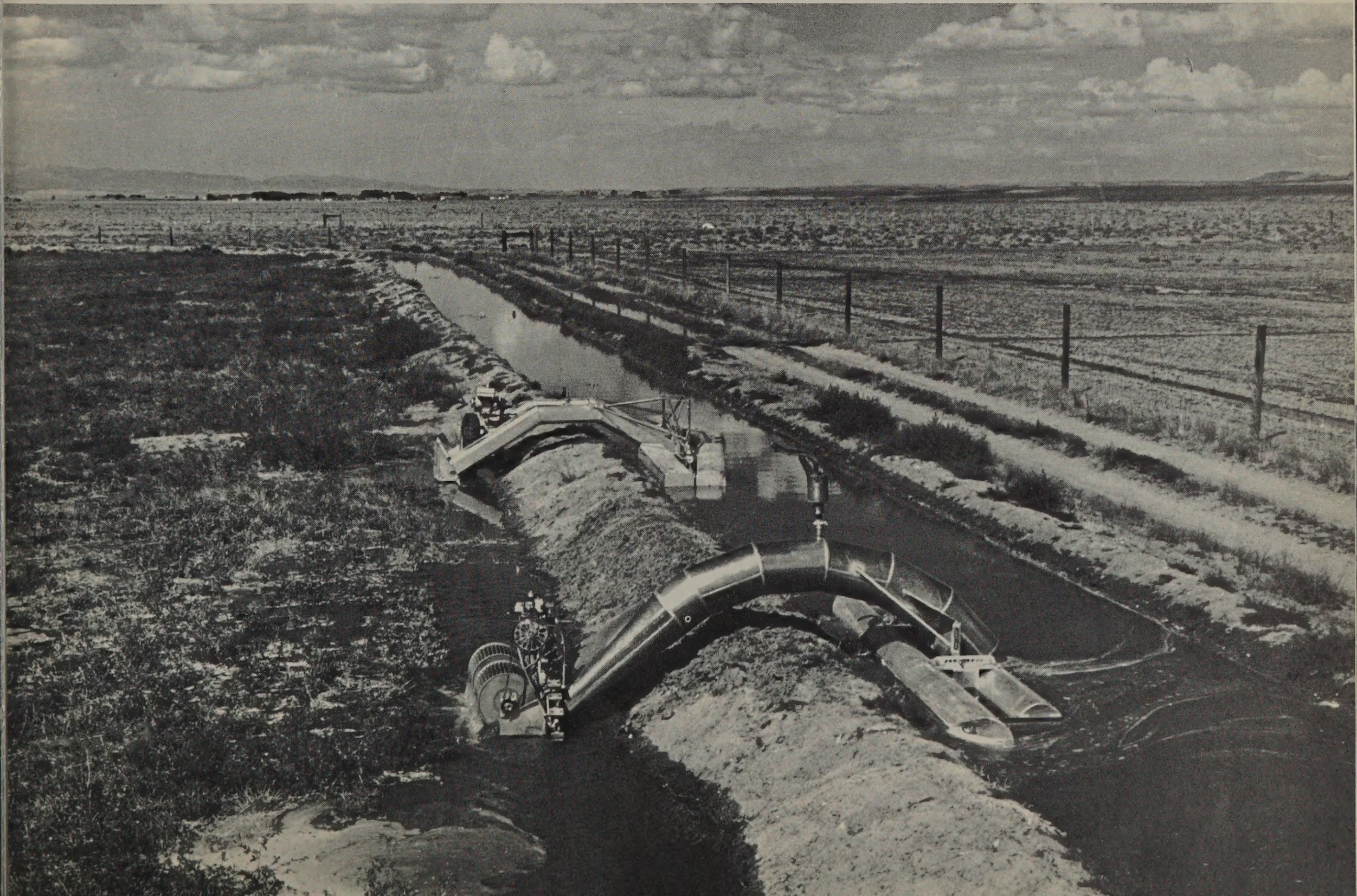
Already the State's Natural Resources Research Institute at the University of Wyoming is conducting water resource research on Elk Mountain, a peak in the Snowy Range. This research, which includes experiments in snow-cloud seeding, is one of several attempts to increase the amount of moisture which flows into the State's rivers from mountain snow.

Water Development

Great possibilities exist for development of Wyoming's water resources. Shortages in some areas arising from uneven water distribution

Mountain lakes and streams are the primary gathering sources of water. Water flowing into Jenny Lake will be eventually used to irrigate croplands below.

Irrigation is an important part of farming and ranching in Wyoming. Modern equipment, such as the automatic syphon, keeps costs down and efficiency up.



could be remedied in part by transporting water from high-supply areas in the State. The city of Cheyenne, for example, has a major program in which water is transported 80 miles from the Snowy Range in the southwest. Also involved is an auxiliary transmountain diversion project to replace water taken from the North Platte River Basin with water from the Upper Colorado River Basin. In order to tap the mountainous regions where moisture accumulates, other expanding communities will probably adopt similar measures. Remedies might also include additional construction of impounding reservoirs. The water resources of the Green and Snake River Basins are virtually untapped in this respect.

For over a century, Wyoming's water resources have been used primarily for irrigation. One of the earliest projects was developed in 1853 by a group of Mormon settlers at Fort Bridger on Blacks Fork in southwestern Wyoming. After the Civil War the rapidly expanding livestock industry brought a comparable expansion of irrigation from the southwest to the northeast corners of the State.

The Carey Act, passed in 1894 to aid reclamation of desert lands, helped open large blocks of public lands to private agricultural development under State supervision. Construction of Federal irrigation projects was begun in 1905, adding to development by individual ranchers and local irrigation and ditch companies.

State-Federal cooperaton in this field has resulted in the recent completion of Fontenelle Dam, which in addition to irrigation storage will provide about 20 billion gallons of water for municipal and industrial uses. In recognition of the needs of growing cities and industries in Wyoming, the State Legislature authorized the Natural Resource Board to finance the additional water storage space at this Bureau ot Reclamation project.

Of the nearly 1.5 million acres of irrigated land in Wyoming, private enterprise developments account for over 1 million acres; the Department of the Interior's Bureau of Reclamation developed facilities for irrigational service to an area of 289,000 acres in 1963 on various projects, and some 30,000 irrigated acres were developed by the Department of the Interior's Bureau of Indian Affairs on the Wind River Reservation.

In recent years there has been an increasing awareness that water can play an additional role in the State's economy, and a marked increase in the use of water for industrial and domestic uses has occurred. As cities have grown and various industries and services moved in, the demand for water to fill new needs has increased accordingly. Industrial users of water now have first priority in Wyoming so that industry can always obtain the water it requires. Ample supplies have been made available for ore processors, chemical producers, and steam-driven electric powerplants. In addition, the use of the State's rivers and lakes for recreation is becoming increasingly important in Wyoming's growing economy.

Underground Supplies

Available underground water is one of the prime factors in the industrial, agricultural, and municipal development of Wyoming. Most of the water which enters the ground, either as precipitation or as runoff from the land surface, moves underground toward lower levels. As it moves, some is returned to the surface in the form of springs and some is used by plants and returned to the atmosphere by transpiration. In arid and semiarid places, such as parts of north-central and southeastern Wyoming, underground water is a particularly valuable resource.

Although Wyoming's underground water resources are substantial, development has been small in comparison to the potential. The full extent of this resource is so far undetermined. Ground water investigations in Wyoming are continuing through a cooperative program between the Department of the Interior's Geological Survey and the State Engineer's Office.

Significant development of undergound water has occurred in southeastern Wyoming where about 15,000 acres of land are irrigated from wells in Laramie County. Many cities obtain municipal water supplies from nearby wells. Deep wells along the North Platte River, Lodgepole Creek, and in the Wheatland area have been successful in producing water for irrigation. The State's petroleum industry, the largest user of industrial water, draws from both surface and underground supplies. Underground water, often the only available source at oil well sites, is used as a secondary recovery agent in "water flooding" oil sands in fields where production has declined.

Flaming Gorge Reservoir winds 91 miles through eastern Utah and southwestern Wyoming. Since the dam was constructed, Flaming Gorge with its national recreation area, has attracted visitors from all over the Nation.

Wind River Diversion Dam is one of several water structures of a central Wyoming irrigation development. The head-waters to the right of the dam are the beginning of the Wyoming Canal.

As requirements for municipalities, industries, irrigation, and other uses increase, it is anticipated that more extensive reliance on Wyoming's ground water will necessarily develop.

Quality of Water

Practically every water use, whether it be municipal, agricultural, or industrial, degrades the physical and chemical quality of water. Although the water quality in Wyoming is good, continuous efforts by State and Federal Governments are made to retain or improve present standards.

The State has a control program which has substantially reduced municipal and industrial pollution. The Wyoming Department of Public Health, through its Division of Environmental Sanitation, has encouraged new industries and municipalities to provide adequate waste treatment facilities so that economic development will not automatically degrade the State's water resources. A continuing cooperative program involving the Wyoming State Engineer, Natural Resource Board, and the Geological Survey provides information about the chemical quality of both surface and underground water, and the sediment conditions in surface streams.

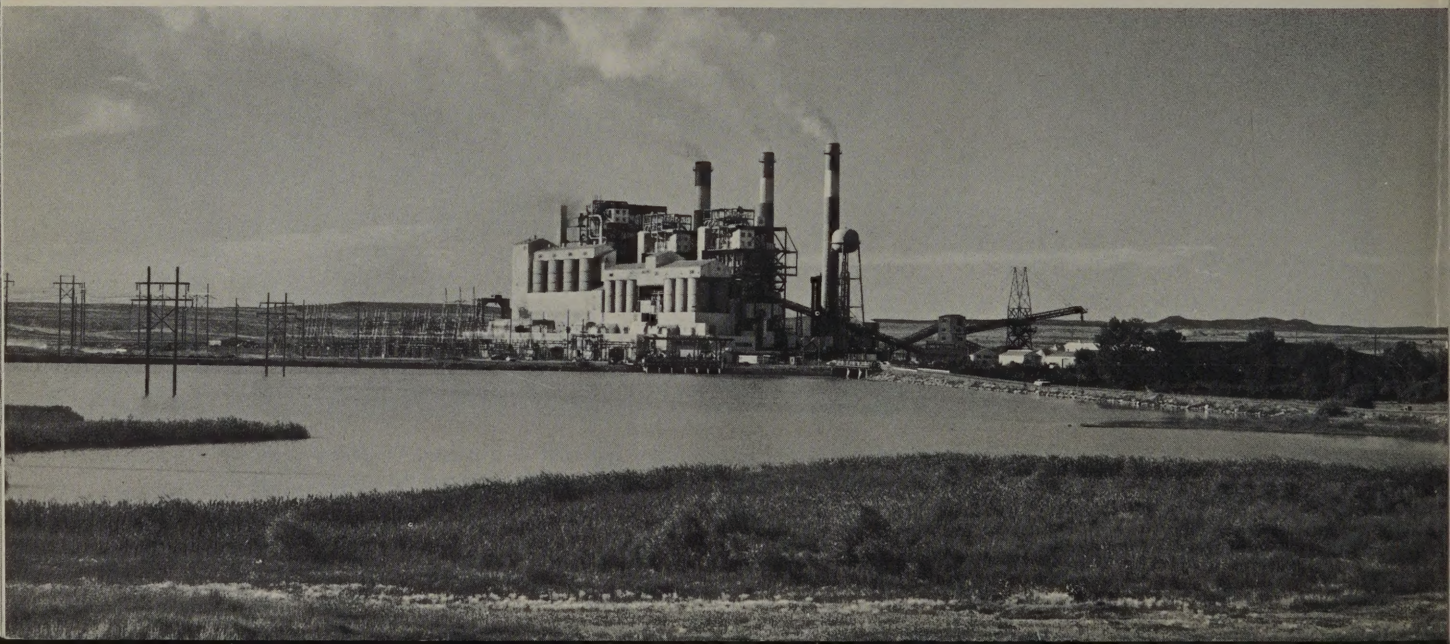
Promising Future for Power

With vast reserves of every source of energy—coal, crude oil, natural gas, uranium, oil shale, and falling water—Wyoming's future supplies of electric power are assured. Because of the State's especially large deposits of subbituminous and lignitic coals that can be mined by inexpensive open-pit operations, future energy requirements are destined to be met increasingly by steam generating powerplants.

About 67 percent of the power production in Wyoming today comes from steam-electric plants. Of an estimated 710,000 kilowatts of generating capacity from Wyoming's electric utilities and industrial plants, about 473,000 kilowatts are produced by coal and about 213,000 kilowatts by hydroelectric plants on the State's rivers. The remaining 24,000 kilowatts of capacity are supplied from internal combustion and other types of generator units. Wyoming also receives a share of the power generated at the 108,000-kilowatt Flaming Gorge Dam Powerplant located just south of the Wyoming-Utah border. Similarly, when Yellowtail Dam is completed near the mouth of Big Horn Canyon in Montana, Wyoming will receive some of the power generated there.

In Wyoming investor-owned electric generating plants have a total capacity of 430,700 kilowatts. Ten Bureau of Reclamation hydroelectric plants in Wyoming generate a total of 208,400 kilowatts from the North Platte, Shoshone, and Wind Rivers. The new Fontenelle Dam and Powerplant has an installed capacity of 10,000 kilowatts. Seven plants composed of hydropower turbines and internal combustion engine generators, with a combined installed capacity of slightly more than 5,200 kilowatts, are operated by a rural electric cooperative in northwestern Wyoming.

About 67 percent of the power production in Wyoming today comes from steam-electric plants.



Wyoming ranks second in the Nation in the production of uranium and has 36 percent of the Nation's uranium ore reserves. This 300-foot pit is at a surface uranium mine in the State's rugged Gas Hills region.

Mineral Resources

With a tremendous diversity of minerals and huge energy reserves, Wyoming is a well-fortified storehouse of resources for economic and industrial growth. Ranking among the 10 major mineral-producing States, Wyoming has increased the value of its mineral output steadily over the past decade.

If minerals loom large in Wyoming, the State's mineral industry itself is dominated by fuels—oil, natural gas, and coal. These three products together account for roughly 85 percent of a yearly mineral output valued at more than $465 million. Wyoming's petroleum production occurring in 20 out of 23 of the State's counties, alone is worth some $360 million, and oil refining is the State's biggest industry. Many of Wyoming's herds of cattle crop grass growing directly above valuable coal deposits, for almost half the State is underlain by coal.

Petroleum and Natural Gas

Since 1884, when the first oil well was drilled in Wyoming near the town of Lander, the production of oil and natural gas has become the leading factor in the State's economy. Today, Wyoming has nearly 300 oilfields, over two dozen of these with annual production totaling more than a million barrels. Park County, in the northwest, is the largest producer, and Hot Springs, Fremont, Natrona, Sweetwater, and Big Horn Counties all have major oilfields.

The State's entire yearly petroleum output is rising and recently topped the 140-million-barrel mark. Reserves are estimated at more than 1.3 billion barrels, placing Wyoming fifth in the Nation. Even so, the industry is constantly probing for additional oil, discovering new fields and new producing zones in the thick sedimentary rocks that occur in Wyoming.

Nine refineries in Wyoming process oil from wells in and outside the State. Their facilities are undergoing expansion, and pipelines are being constructed to link refineries with producing fields. Continuing research and a liberal exchange of geologic data between oil-producing companies are providing a sound basis for the future growth of Wyoming's petroleum industry.

Natural gas comes from rock formations similar to those that produce oil, and Wyoming's natural gas output has been rising along with her petroleum production. The State is rich in natural gas; recent reports estimate the State's reserves at nearly 4 billion cubic feet. Primary producing counties include Big Horn, Niobrara, Crook, Hot Springs, Fremont, Sublette, and Sweetwater. Fresh discoveries in Sweetwater County account for part of the substantial increase in reserves.

Looking to the future, petroleum products may someday be obtained from other rocks of Wyoming—her immense deposits of oil shales in the Green River Basin. Oil shale contains organic chemicals which, under the proper conditions of heat and pressure, can be converted to an oil that yields products like those obtained from petroleum. It is estimated that Wyoming has at least 43 billion barrels of additional oil in this form beneath her surface.

Coal

Wyoming's coal output has shown a gradual but steady increase since 1958. After World War II production declined in Wyoming, as it did almost everywhere else. However, it soon became clear that coal was a cheap and readily available source of electric power, and ultramodern generating plants were designed to burn Wyoming coal. Between 1960 and 1961 coal production jumped 25 percent, and it now totals about 2.8 million tons annually.

Wyoming's total coal reserves are estimated at more than 121 billion tons, of which 13 billion are bituminous, and the rest subbituminous. The major coal-producing counties are Converse, Campbell, Carbon, Sheridan, Lincoln, and Sweetwater.

Metals

Among her metallic resources, Wyoming counts uranium as most important. The State ranks second in production, as well as in reserves of uranium ore. In a single recent year, Wyoming produced over $25 million worth of uranium for national defense, scientific research, medical treatment, and electrical generation. With an estimated 25 million tons still in the ground, Wyoming has 36 percent of the Nation's uranim ore reserves. The principal producing areas are the Gas Hills in Fremont and Natrona Counties; Shirley Basin in Carbon County; Crooks Gap in Fremont County; Dry Fork in Converse County; the Hulett-Carlisle region of Crook County; and the Baggs region of Carbon County. Ore production in the State exceeds a million tons a year.

A mixture of oil, sand, and ground walnut shells is being pumped into a reservoir on one of Wyoming's many oil fields which will create new passages.

Iron ore ranks next to uranium among Wyoming's metals, and the State produces over $6 million worth a year from three mines in Platte, Fremont, and Albany Counties. Small amounts of beryllium ore also are mined in Wyoming, and the production of vanadium, as a byproduct of uranium ore processing, is on the increase. The State also contains great deposits of anorthosite, an aluminum-bearing mineral. Although less rich in the metal than bauxite, anorthosite can be made to yield its aluminum by a technically feasible extraction process.

Nonmetals

Nonmetallic minerals contribute heavily to Wyoming's economy. In terms of annual production value, the most important nonmetal is trona, or natural sodium carbonate, ranking third among Wyoming's mineral products. Better known as soda ash, this compound is important in the manufacture of chemicals, glass, paper, rubber, and other products. Reserves of trona in Wyoming's Green River Basin have been estimated at several billion tons.

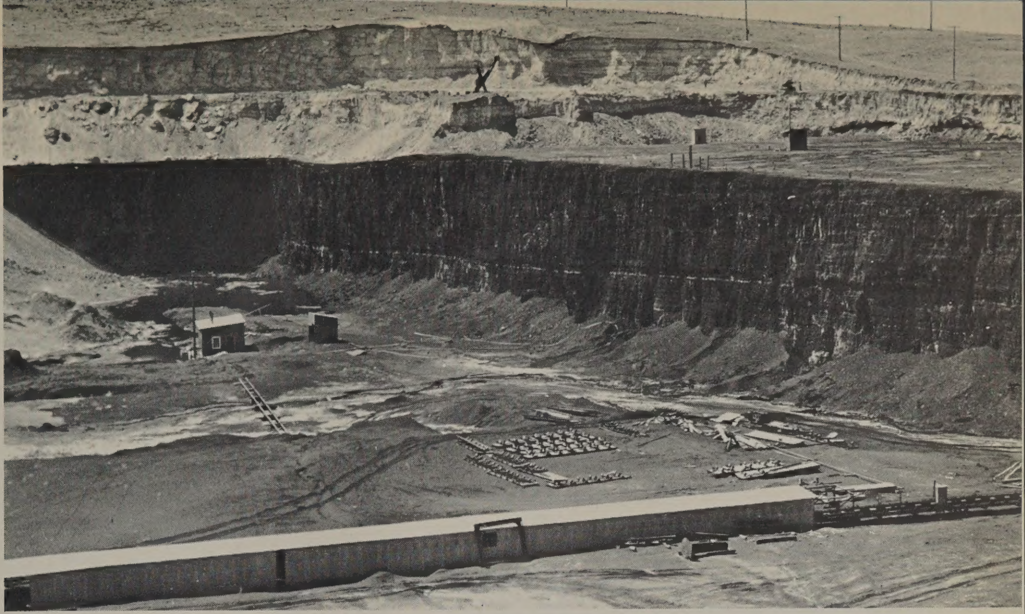
Wyoming contains the Nation's largest reserves of bentonite, "the clay with a thousand uses," and produces over $10 million worth in an average year. Lubricating mud for drilling oil wells is perhaps the most important of bentonite's many uses, but it also has applications in iron and steel foundry work, the pelletizing of taconite iron ore, and other key processes. Principal bentonite deposits are in Crook, Weston, Big Horn, Johnson, Natrona, Hot Springs, and Fremont Counties.

Sand and gravel is produced throughout Wyoming for construction of roads and buildings. Production is rising, and is now valued at over $5 million a year.

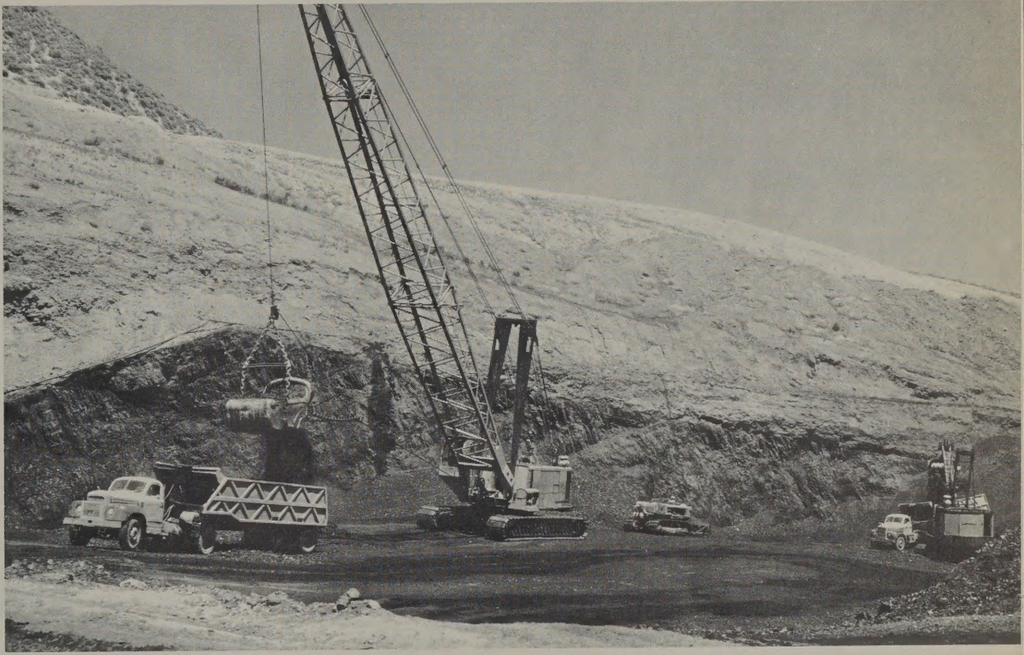
More than $3 million worth of stone is produced yearly in the State, including limestone, granite, dolomite, sandstone, and basalt. Road construction uses recently increased stone output by 44 percent. Other nonmetallic minerals produced in Wyoming include phosphate rock, sulfur, gypsum, and vermiculite.

A growing number of amateur rock collectors are discovering the recreational value of Wyoming's mineral resources. The State offers the rockhound a great variety of semiprecious gem stones including agate, petrified wood, and jade.

Pictured is the world's thickest coal seam mined by open pit methods. Wyoming has the largest coal reserves of any State.



A coal seam, like an ice berg, only shows part of itself. This seam in Lincoln County being stripped mined is 85 feet thick.



Trona is converted to soda-ash in Sweetwater County. Because of the versatility of this compound, trona reserves are all important.

A high, often dry land, Wyoming pastures three times as many cattle—more than a million head—as it has people.

Land as a Resource

The land in Wyoming is a resource supporting both plant and animal life. In an even larger sense, the land sustains human life too, for it provides a livelihood for the farmer, the rancher, the worker in timber industries and a multitude of related industries.

On the stretches of plains, cattle and sheep feed on sagebrush and grass. With sunshine and a little water, the rangeland produces fine forage. Abundant land and forage led to Wyoming's great livestock industry which still is vital to the State's economy.

In the river valleys, irrigation helps the rich Wyoming soil yield fine crops of sugarbeets, dry beans, hay, sorghums, and wheat. Dryland farming also produces valuable feed grains. On the mountain ranges, thickly forested slopes evidence another product of the land important not only for lumber but for watershed protection, wildlife habitat, woodland grazing, and recreation.

With over 62 million acres of land, Wyoming offers lots of room for farming, ranching, and industrial growth. About 30 percent of the State is public domain, land left in Federal ownership because early settlers found it unsuitable for homesteading. Generally, this land provides rangeland for grazing, as deserts, mountains, or the absence of water for irrigation make it unsuitable for farming. An additional 20 percent of the land in Wyoming is contained in the national forests and national parks.

Privately owned land exceeds 26 million acres in Wyoming, about 42 percent of the total acreage, and ownership is most heavily concentrated in the eastern part of the State in areas where water is available. State and local government-owned lands comprise about 7 percent of the total, and Indian lands, mainly on the Wind River Indian Reservation, make up the remainder, about 1.8 million acres.

Rangeland—Heart of an Industry

Wyoming's extensive rangeland is the backbone of the State's livestock industry, with over 80 percent of the State's land in pasture and range.

About 17 million acres of public land are suitable for grazing under the Taylor Grazing Act of 1934. Some 2.4 million acres of national forest land are also usable for this purpose under the Multiple-Use-Sustained Yield Act of 1960. These federally owned lands make a significant contribution to the support of Wyoming's livestock industry. Livestock owners are allowed to graze their animals on the public lands and in national forests under controlled conditions. Well over 80 percent of the State's livestock depends upon use of federally owned grazing lands for feed during some seasons of the year.

The rangeland supports a livestock industry which accounts for about 85 percent of Wyoming's total agricultural income. The State's farms and ranches number over 1 million head of cattle and calves, and over 2 million sheep and lambs. Wyoming ranks second in the Nation in sheep production, and second in wool output.

Agriculture

About 4 percent of the total land area in Wyoming is used for the production of crops. Fertile farmlands range in elevation from about 4,000 feet in the northern end of the Big Horn Basin to nearly 7,200 feet in the Laramie Plains of southeastern Wyoming.

Wyoming's agriculture depends on an average frost-free season of 60 to 140 days. Principal agricultural areas are in the Big Horn Basin, Wind River Basin, Platte River Valley, Star Valley, and in small areas surrounding major population centers. The amount of irrigated cropland exceeds that devoted to dryland farming.

Consolidation in recent years has increased the size but decreased the number of farms and ranches in the State. Today, the State's 9,800 farms and ranches average about 3,600 acres, more than double the size in 1935. About 20 percent of these establishments produce commercial crops while the remainder are devoted mainly to livestock production.

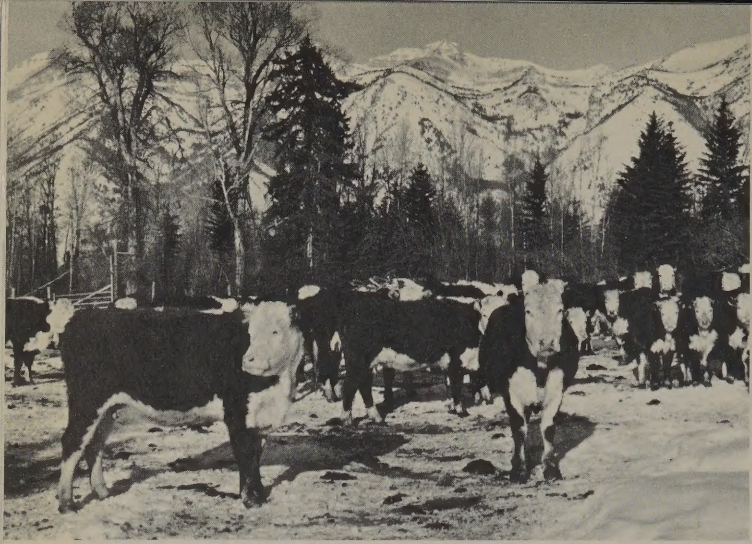
Agriculture is the second most important industry in Wyoming. Receipts from marketing of produce has been steadily increasing. The major crops are wheat, sugarbeets, dry beans, and hay. Corn and potatoes are locally significant and Star Valley is noted for its fine cheese.

Scientific farming methods and continuing research conducted by the University of Wyoming offer a bright outlook for the State's agriculture. On a pilot farm on the Bureau of Reclamation's Seedskadee project in southwest Wyoming, Federal and State research agencies are demonstrating efficient farming and irrigation methods that will produce the best crops and finest livestock.

Livestock and livestock products account for more than 80 percent of Wyoming's agricultural income. Here two cattlement discuss their purebreds on the range with the Tetons in full view.

Basque shepherds once herded vast flocks of sheep on the open range but today more and more sheep are raised behind fences. Second only to Texas in wool production, Wyoming supports over 2 million sheep and lambs.

The trend is toward smaller holdings and Wyoming's ranch land has been split up accordingly. Here during the annual spring roundup, cattle are sorted out and branded. The *State's* cattle are sent to markets all over the United States.



Winter grazing is possible with the large quantity of hay that is raised in the fall on half of Wyoming's cropland. In autumn the valleys turn a rich gold as the hayfields begin to yield their abundant supply.

With the help of good programs of pasture and grass management and land improvement, Wyoming ranchers are turning areas formerly covered with sagebrush and aspin into lush, green pastures.

Forest Resources

About 16 percent—nearly 10 million acres—of the land in Wyoming is forested. This resource serves many uses—timber, watershed, recreation, and grazing—and its multiple-use management by the Forest Service of the U.S. Department of Agriculture, the Bureau of Land Management, U.S. Department of the Interior, and industrial forest owners, assures a continued forest bounty.

Half of the forested area, lying mostly on mountain slopes and at higher elevations, comprises timber of commercial value. About 80 percent of the State's commercial forest land is administered by the Federal Government and most of this lies on public land and in the nine national forests located partially or wholly in the State.

Lumber—especially valuable because of its variety of uses—leads Wyoming's forest products. Lodgepole pine and Engelmann spruce are the principal lumber species but Douglas fir and ponderosa pine are also prominent. The lumber is used for construction materials shipped to markets throughout the world, for poles and posts on farms and ranches, and for agricultural and mining industries. Railroad ties have been an important product since the first railroads pushed across Wyoming and the continental divide. Some pulpwood also comes from the forests and a new product—composition board—is gaining importance. Over 110 million board feet of lumber are cut from Wyoming's forests in a typical year.

Several other species of fir and pine, juniper, quaking aspen, and cottonwood—the State tree—are found in Wyoming's forests. Aspen are particularly apparent in the fall as splashes of yellow on mountain slopes covered with dark green pine trees.

The industries which harvest and process Wyoming's forest crop employ one out of eight manufacturing workers in the State. Its commercial forest land supports over 22 billion board feet of sawtimber, a resource of substantial value. Estimates of current timber growth indicate that Wyoming's forest resources could support a forest-products industry at least twice its present size. Development of new markets and forest products is expected to considerably expand the forest industry, destined to play an increasingly important role in the State's economy.

This is big country.

The National Elk Refuge near Jackson Hole is the home of the largest elk herd in the world. Rangers often find it necessary to reduce the herd following the calving season and surplus animals are sent as far away as Texas and Michigan.

Fish and Wildlife

Wyoming, with vast acres of big game habitat and many miles of fishing waters, is a wonderland for the outdoorsman. The State's great expanse of plains and rugged mountains means space for untamed animals to roam free in their natural habitat; space also for the hunter or the naturalist. The variety of wildlife—whether seen through the eye of a camera, the sight of a gun, or the window of a car—offers enjoyment to thousands of visitors and residents each year.

The world's largest herd of pronghorn antelope is found in Wyoming; black bear cavort on the side of the road and peer curiously at visitors to Yellowstone National Park; bighorn sheep attract intrepid mountain adventurers. In the fall, geese form their winged V overhead; the great trumpeter swan glides across spring ponds; the unusual osprey hovers low for his victim. And, more than 80 different kinds of fish are found in the State's streams and lakes.

Hunting and fishing are big business in Wyoming. In a recent year, more than 170,000 hunters and fishermen spent over $53 million enjoying their favorite sport. Hunters bagged over 133,000 big game animals including deer, antelope, elk, and moose.

Big and Wild

Wyoming's population of big game—pronghorn antelope, elk, moose, bighorn, bear, deer, and buffalo—is about as large as the State's human population.

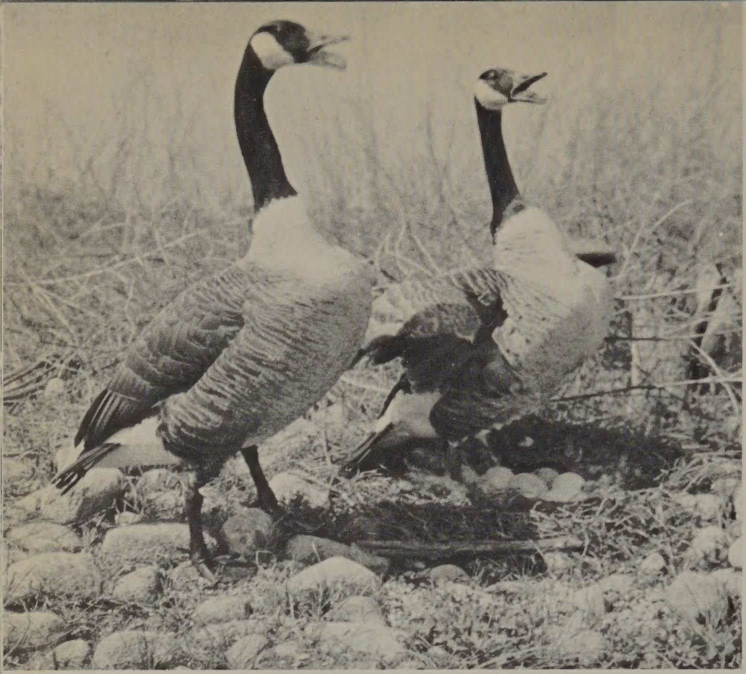
The pronghorn antelope, unique to America and the fastest animal on the continent, was once close to extinction. But, with good protection and plenty of running and grazing room on Wyoming rangelands, the pronghorn herd has been replenished and now ranks second in number among the big game animals of the State. In a recent hunting season more than 37,000 antelope were bagged.

Besides the fleet-footed antelope, Wyoming is home to the largest elk herd in the world. More than 7,000 American elk, or Wapiti, as the Indians named them, have been counted at the National Elk Refuge near Jackson and the total number in the State is estimated to be over 35,000. Winter visitors to Jackson Hole get a thrilling, close-range look at thousands of these elk feeding on the National Elk Refuge after they have migrated from the mountains.

Deer are found almost anyplace in the State and the population is estimated in the hundreds of thousands. Mule deer, the most common species in Wyoming, and the smaller white-tail deer are popular game animals for hunters; thousands are taken each year in forested areas open to hunting. Because of the great numbers of deer in Wyoming, hunting is actually mandatory to reduce the population to a level that can be supported by the available forage and vegetation. The Wyoming Game and Fish Commission keeps a surveillance of the deer population to properly manage and maintain the number of deer in the State.

Moose are found in the northwestern part of the State. Hunting of this animal, controlled by permits, provides exciting sport. Mature moose weigh about 900 pounds and measure nearly 6 feet tall at the shoulder. The high mountains provide excellent habitat for the majestic bighorn. Graceful and sure-footed, bighorns are cautious creatures, retreating to mostly inaccessible terrain.

Several thousand black bear live in the forests and mountains, many of them in the two national parks in Wyoming. The grizzly bear is a rare sight over most of the State but is frequently seen in the national parks. Mountain lions are still found in the remote and wild sections of the State, and bison can be seen grazing in national parks where they are protected.



Excellent nesting and feeding grounds for migrating Canada geese are maintained by the State.

Visitors to the National Elk Refuge can get as close as this to the herd which feeds there in winter.

A variety of fur-bearing animals—some particularly valued for their pelts—inhabit Wyoming. The beaver, famous in the trapping history of the State, is found in nearly every section of Wyoming, building his mud-and-stick dams along streams. Today, however, the muskrat is the State's leading furbearer. Other such animals include the otter, marten, weasel, mink, badger, raccoon, fox, and coyote. Some lynx can be spotted in the mountains, and bobcats are numerous, even on the plains.

Waterfowl and Game Birds

Several species of grouse—sage, ruffed, blue, and sharp-tailed—are native to Wyoming, while the Chukar and Hungarian partridge, wild turkey, and ring-necked pheasant have been successfully introduced to the State.

The sage grouse, found almost everywhere in Wyoming except the northwestern and southeastern corners of the State, is particularly sought by hunters who, in a recent year, bagged over 70,000. Blue grouse are found in forested areas while the sharp-tailed grouse inhabit brush-covered land. The brightly colored ring-necked pheasant was first brought to America from Asia. Established in the north-central and eastern parts of Wyoming now, the pheasant is second in importance to the hunter as an upland game bird. Wild turkeys are highly prized by hunters. The Hungarian partridge or "Huns" are found in west-central Wyoming and the Chukars thrive in the dry rugged parts of the State.

Other birds familiar to Wyoming are the osprey, a large hawk with a 6-foot wingspread which dives into water for food; often called the fishhawk.

Two of the continental waterfowl flyways—the Pacific and Central—cross Wyoming. Important feeding, nesting, and resting habitats for migrating ducks and geese are provided by the State. The great Canada geese are frequent visitors to the State, which conducts several programs to improve nesting conditions for them.

It is said that Wyoming produces more ducks than its hunters shoot. Mallard and blue-winged, green-winged, and cinnamon teal nest in the valley marshes and the common and Barrows' golden-eye and the harlequin duck bring off their broods along the mountain streams. The State also has fairly large populations of nesting Canada geese. Good numbers of mallards winter over most of the State and a few trumpeter swans winter in the Jackson Hole country. Each year a few broods of young trumpeters are produced in Wyoming's mountain lakes.

The Wyoming Game and Fish Commission has a very active program of acquiring and

A herd of Bighorn is a rare sight for the animals live in the high mountains away from civilization.

The black bear, on the other hand, frequently comes down from his mountain habitat to peer at visitors.

developing habitat for the State's fish and wildlife resources. An important phase of the program also is the acquiring of access points to these public lands and waters so that the citizens of Wyoming can make the greatest use of their valuable natural resources.

Famous for Fish

Wherever you go in Wyoming, you aren't far from a place to fish. With about 20,000 miles of streams and over 5,000 lakes, the State offers excellent opportunities for fishermen to try their skill. Many spots are just a few minutes from Wyoming's highways while hundreds of areas await the adventurous sportsman who enjoys the backwoods and seldom-seen places.

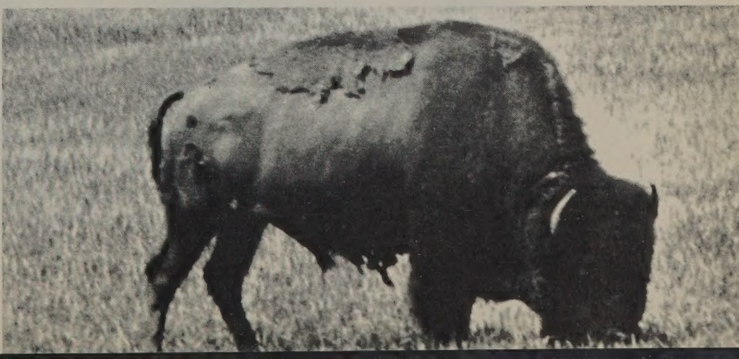
The State's waters contain 21 different kinds of game fish, including six different kinds of trout—rainbow, cutthroat, golden, brook, brown, and mackinaw. Natural and impounded lakes support such warm-water fish as largemouth bass, crappie, sunfish, walleye pike, perch, and catfish. Bass, crappie, and perch are so plentiful that there's no creel limit on them throughout the State.

Wyoming is especially known for its abundant cutthroat and rainbow trout. Rainbow distribution is particularly widespread, occurring in most trout waters; the cutthroat is abundant in streams in Yellowstone National Park and scattered waters in the Rockies. The introduced golden trout is common in the high mountains, primarily in the Wind River Indian Reservation and Bridger National Forest. The world's record golden trout was taken in northwestern Wyoming at Cook's Lake. Brook trout, another introduced species, is almost limitless in numbers in the high mountain country steams and lakes. The less common mackinaw reside in the deep lakes of the Jackson Hole country and Fremont Lake on Upper Green River.

Other cold-water species, besides trout, available to the angler are the whitefish, kokanee salmon, and grayling. The Rocky Mountain whitefish are natives of Wyoming, found particularly in the western part of the State.

The Wyoming Game and Fish Commission has seven hatcheries and four rearing stations, which produce thousands of trout annually for stocking State waters.

Members of Yellowstone's buffalo herd are a surprising sight to most visitors to the park.



Indians and Their Resources

Wyoming's grassy plains, great forests, and deep mountain valleys were once the hunting ground of many Indian tribes: Arapaho, Crow, Northern Shoshone, Bannock, Cheyenne, Comanche, Dakota (Sioux), Kiowa, Pawnee, and Ute. Thousands of Indians roamed throughout Wyoming for generations before the white man came. Today, approximately 3,750 Arapaho and Shoshone Indians live on the Wind River Reservation, which comprises over 1.8 million acres of land located in west-central Wyoming.

The Arapaho, along with the Crow, Sioux, and Cheyenne, were warlike Indians who controlled eastern Wyoming while the Shoshone, friendly toward the settlers, lived in the western section. The Arapaho were one of the most feared raiding tribes on the Plains, at war with virtually every other tribe in the Wyoming region. A gradual division of the tribe into a northern and southern branch occurred during the 19th century and the southern branch eventually moved to the area of the Arkansas River. The mass movement of settlers across the plains around 1840 drove the remaining Plains Indians out of Wyoming and left the Shoshone alone in the whole vast area for a time.

The Shoshone were constantly troubled by attacks from other tribes such as the Arapaho. Seeing his tribe greatly reduced in numbers, the great Shoshone Chief, Washakie, requested a reservation and Government protection. In 1878, after peace had been made among the other Indian tribes and all were confined to reservations, the Northern Arapaho agreed to peaceful terms with the Shoshone, with whom they share the Wind River Resevation.

The two tribes now own the Reservation in common. The Arapaho members generally reside in the eastern portion while the Shoshone settlement centers in the Fort Washakie Area. The bulk of the Wind River Reservation land is tribally owned, and in former years much of it was leased to non-Indian stockraisers and farmers. Today, that practice is declining. Few of those leases are being renewed, and increasing numbers of Indians are using the land for their own agricultural activities.

Reservation Resources

The reservation is one of the best watered parts of the State of Wyoming and supports large herds of Indian-owned cattle, sheep, and horses.

Large quantities of hay and grain are raised. Supplementing an average annual rainfall of only about 12 inches, irrigation is used to increase the productivity of some 70,000 acres of crop and pasture land. Additional reservation assets include about 400,000 acres of forest and over a million acres of open grazing land.

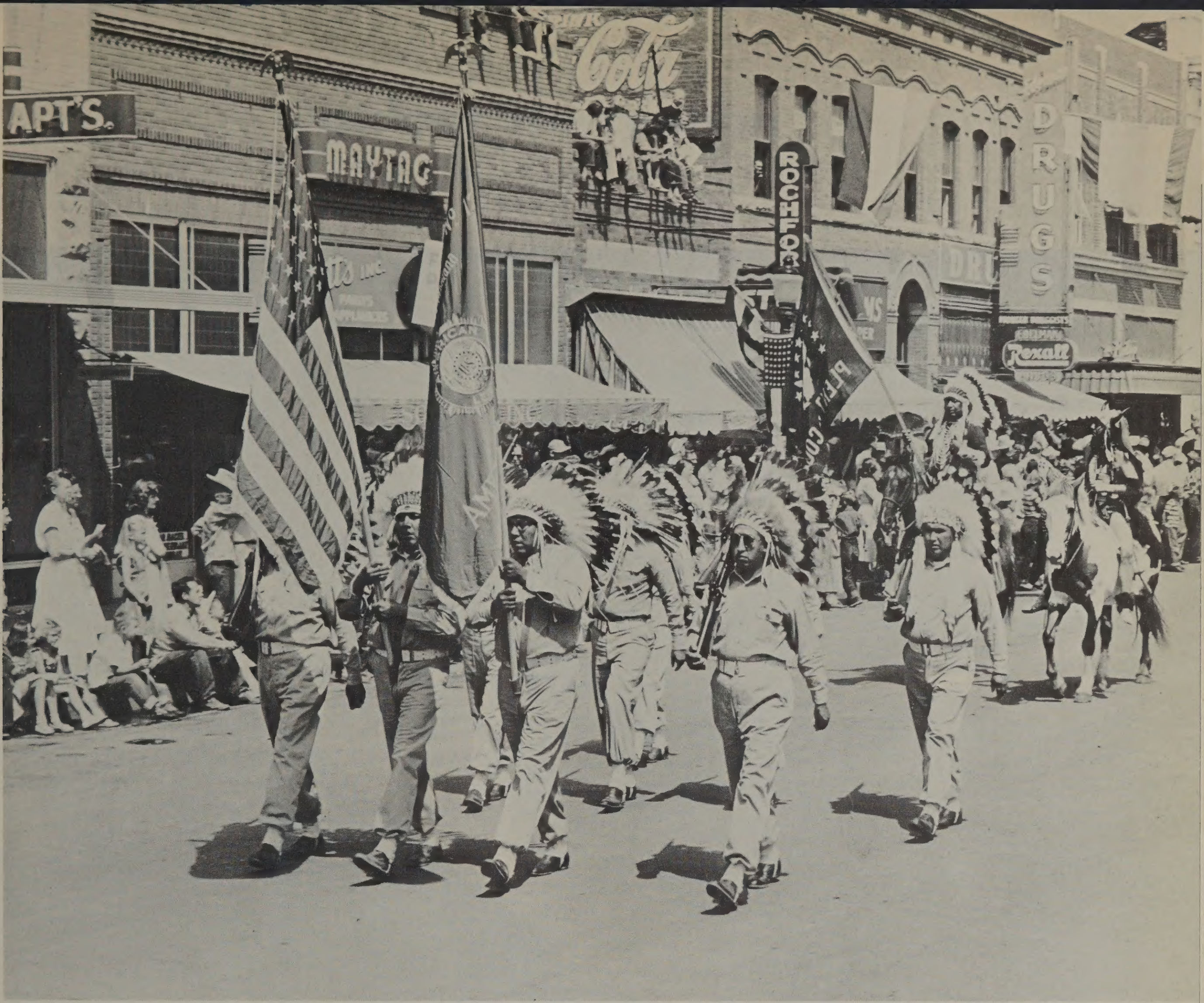
The reservation is rich in natural resources other than land and timber. Nearly 400 oil and gas leases are currently in effect, affording the Indians an income—including royalties, ground rental, and bonuses from sales—that amounted to over $1.9 million during a recent typical year. A lesser, but increasingly important, source of tribal income is realized from royalties accruing from short-term sand-and-gravel permits and permits to prospect for gypsum, which is known to be present on the reservation.

Although commercial forest lands on the reservation support over 740 million board feet of timber, much of the timbered acreage is in a designated roadless area of extremely limited accessibility. This deterrent to large-scale timber production, combined with a currently limited market demand, has resulted in negligible receipts from timber sales. A recently completed inventory of the reservation timber assets has provided the data needed to develop a sound forest management plan aimed at providing an expanded market for Wind River timber.

The reservation offers vacationers and tourists opportunities to fish, hunt, camp, and hike. Chief Washakie Plunge provides swimming and bathing in mineral waters from natural hot springs near Fort Washakie, and is a popular year-round attraction. Wind River Reservation

A Shoshone princess visits the grave of Sacajawea on the Wind River Reservation. She carries her child in the same manner in which the Indian guide carried her son on the Lewis and Clark Expedition.

Memory of
SACAJAWEA



Over 40 tribes of Indians from about 18 States, in addition to organizations such as the American Legion, participate in the All American Indian Days, a colorful 3-day celebration which takes place in Sheridan each year.

has considerable recreation potential which could be realized through development of lakeside resorts, lodges, winter sports areas, and the improvement of existing natural attractions, which include scenery varying from Wind River Canyon, the rugged Rockies, and green, irrigated valleys to vast, semiarid rangelands.

Historic Area

The rich historical background of the Wind River Reservation and its Shoshone and Arapaho residents is of interest to students of Indian and American history.

Fort Washakie, present tribal headquarters and former frontier military post, was named for the celebrated Shoshone chief who ruled as paramount leader of his people for 60 years, dying in 1900 at the approximate age of 102. Always friendly to his non-Indian neighbors, he led his people in protecting them from raids of the hostile Sioux and Cheyenne in the early days of the settlement of Wyoming.

Sacajawea, the Shoshone girl guide of the Lewis and Clark Expedition, died at Fort Washakie in 1884 and lies buried in the Shoshone cemetery near the Wind River Agency.

Indian ceremonial and social events such as the annual Powwow and Sun Dance are colorful and lively attractions for visitors. A few Indians still create the intricate beadwork designs on moccasins and belts for which their ancestors were famous.

Outdoor Recreation

Combining natural wonders, historic landmarks, and endless sports opportunity, Wyoming means variety to the vacationist and outdoorsman. The State offers something for every recreational taste. At the turn of the road may be a panorama of flaming canyons or snow-capped mountains, a steaming geyser, the roar of a waterfall, or the gurgle of a trout stream.

Recreation is always in season. Summer offers fishing, hunting, boating, swimming, water skiing, mountain climbing, rockhounding, trail riding, and visits to national parks and forests. Winter means skiing, ice fishing, cutter races, and snowmobile trips. In spring and fall, the hunting and fishing seasons are in full swing.

Such attractions explain why tourism is the State's third largest industry and still growing. About 3 million visitors come to Wyoming each year; they spend an estimated $150 million.

The State's spectacular wilderness areas preserve the rugged grandeur of the frontier for those hardy enough to pack into the high country on horseback, hike through dense forests, and survey the splendor of untouched nature. The flavor of the early west lingers in ghost towns such as Atlantic City and South Pass, in the deep ruts left by pioneer wagons, around the lonely pony express station standing on the plains, at the grave of Sacajawea, and in the historic forts and monuments.

One of Wyoming's special attractions is the rodeo, and more than 50 are held annually throughout the State. Rodeos are surrounded by days of celebration including Indian festivals, pageants, and parades. The "Daddy of 'em all", nationally famous Cheyenne Frontier Days, brings over 150,000 people to the State capital every July. Dude ranching is also popular in the Cowboy State and at many of these ranches, dudes can join the "hands" in "working" steers and dogies. Throughout the State are accommodations for every taste and budget, from luxury dude ranches and lodges to motels, hotels, and rustic log cabins.

Wyoming's major Federal, State, and local recreation areas are listed and mapped at the end of this chapter to show the acreage, type of visitor use, and outdoor activities available at each area.

National Parks

A large part of Wyoming is given over to Grand Teton and Yellowstone National Parks, Devils Tower National Monument, and Fort Laramie National Historic Site. Over 4 million people visit these areas each year. Wyoming has the distinction of being the location of the first National Park (Yellowstone) and the first National Monument (Devils Tower).

Grand Teton and *Yellowstone National Parks* are adjacent to each other in the northwestern section of Wyoming. Grand Teton National Park comprises the most impressive part of the Teton Range—sheer pinnacles of jagged rock, glacier dotted, ever changing and ever beautiful in the varying moods of the day. The Tetons were a noted landmark to Indians and mountain men because they rise abruptly from the level basin of Jackson Hole. This valley, rich in Western lore, was named for an early explorer, David E. Jackson. The grandeur of the mountains is reflected at their base in Jackson Lake, one of the largest lakes in Wyoming.

Grand Teton National Park offers a variety of activities, from guided raft trips down the rapids of the Snake River, which courses through the area, to hiking and riding on 200 miles of trails, to mountain climbing. The camera fan has much to choose from: unsurpassed scenery of mountains, valleys, snowfields, and canyons; a great variety of wild flowers; birds, moose,

Information tables listing major Federal, State, and local recreation areas in Wyoming and a location map appear at the end of this chapter. The acreage, type of visitor use, and outdoor activities available at the various parks, forests, and recreation sites can be found by reading across the table.

deer, bear, and beaver ponds. Inside the east entrance to the park is Jackson Hole Wildlife Range where elk and bison graze at close range. A school of mountaineering is located in the park and those qualified can try their skill on the sharp Teton peaks. Nature walks, pack trips, boating, fishing, swimming, riding, and water skiing are also offered. Campgrounds—some with trailer accommodations—and visitor centers are located throughout the park.

Open from May 30 to September 30, the park may be reached by railroad, bus, and airline, and by roads leading from all directions. Whatever the approach to the park, the lofty Tetons dominate the view.

The First National Park

Early explorers called the area that is now Yellowstone National Park a "wonderland" because of its great variety of startling natural phenomena. Today, Yellowstone—the oldest and the largest (2,221,773 acres) National Park in the United States—preserves a fantasyland of geysers (including Old Faithful), hot springs, bubbling mud volcanoes, brilliant pools and terraces, breathtaking waterfalls, towering mountains, canyons, and rushing rivers. Most of the park is located in the northwestern corner of Wyoming with part of it extending into Montana and Idaho.

One of the greatest wildlife sanctuaries in the world, Yellowstone treats visitors to glimpses of great numbers of wild animals and birds living in undisturbed native surroundings. Best known of all the animals are the park bears often encountered along the roads. They are engaging, but wild, and visitors are warned not to feed them and to keep at a safe distance. About 200 species of birds including the bald eagle, ospreys, gulls, pelicans, and trumpeter swans live in the area.

Yellowstone also features the Grand Canyon of the Yellowstone River—24 miles of twisting, sheer rock walls over 1,000 feet deep and tinged with red and every shade of yellow. Trails lead to the brink of Yellowstone River's Lower Falls, which thunder 308 feet, twice as high as Niagara, into the canyon. The Upper Falls are almost as spectacular although they drop only 109 feet. Yellowstone Lake, whose blue waters are fed by snow from forested mountains that surround most of its 110-mile shoreline, reaches a height of 7,731 feet, making it the largest mountain lake in North America at such an elevation. The lake is renowned equally for its beauty and for cutthroat trout.

A road called the Grand Loop winds through the park, touching on all major points of interest including Mammoth Hot Springs, Old Faithful, Fishing Bridge, and Geyser Basins. In late August each year, a pageant reenacting the 1870 campfire scene of the park founders is presented at the original site near Madison Junction. Visitor centers, campgrounds and other types of accommodations are located along the Grand Loop Road.

Recreational activities include camping, hiking, riding, boating, and fishing. Yellowstone can be entered by roads from Gardiner, Cooke City and West Yellowstone, Montana, and from Cody and Jackson, Wyoming. Buses serve the park from May through October and connect with railroad stations and nearby airports.

Other Park Areas

Devils Tower, the tallest rock formation of its kind in the United States and a landmark to explorers and settlers pushing their way west, was proclaimed the first National Monument in 1906. The stump-shaped cluster of rock columns, 1,000 feet across at the base, looms 1,280 feet high above the Belle Fourche River in the northeast corner of Wyoming. Standing in lonely grandeur as a towering beacon above the grassy plains, the formation is the remains of a volcanic intrusion. Because of its startling shape and size, Devils Tower has become prominent in legend and folklore.

A mile-long, Tower Trail encircles the base of the formation, and campsites are located on the grounds of the monument which covers 1,347 acres. The entrance is on State Route 24, 7 miles north of U.S. 14.

Visitors to Fort Laramie National Historic Site in eastern Wyoming can inspect surviving buildings of the most important and durable of the Army posts guarding the covered wagon trails to Oregon, Utah, and California in the mid-1800's. Until the fort was abandoned in 1890, it was involved in numerous campaigns and treaties with the Indians. Some of the original structures are being restored; the ruins of others still stand.

During its heyday, Fort Laramie was one of the major depots for the vast fur trade of the Rocky Mountains. Cavalry units, pony express riders, overland stage passengers, cowboys, and pioneer homesteaders all used the fort in later years. The fort can be reached today by traveling 3 miles southwest of the town of Fort Laramie on U.S. 26.

Boating and fishing are prime attractions at Flaming Gorge National Recreation Area in southwestern Wyoming and northeastern Utah. Administered jointly by the National Park Service and the Forest Service, this recreation area surrounds the 91-mile-long reservoir created by construction of Flaming Gorge Dam on the Green River. Part of the lake winds through spectacular Flaming Gorge and Red Canyon, carved by the Green River in the Uinta Mountains. Rolling rangelands and forested mountains surrounding the lake abound with wildlife such as antelope, mule deer, and elk. The lake is stocked with rainbow trout brought from national fish hatcheries in Wyoming, Utah, and Colorado.

The entire region is a geologist's outdoor museum. Weirdly twisted and distorted strata, eroded rock formations, and brilliantly colored rock layers provide unusual scenes for study and picture taking.

Several campgrounds, picnic areas, and boat-launching ramps have been constructed around the lake, and others are under development. The area may be reached from the town of Green River on Wyoming Route 530 and from Vernal, Utah, along Utah Routes 44 and 260.

National Forests

The nine National Forests in Wyoming preserve the natural beauty of the Continental Divide country as it appeared in the days of the early West, and offer a great variety of recreational opportunities. Nearly 4 million visitors hunted, camped, skied, hiked and rode horseback in these forests in a recent year.

Wyoming ranks second in the Nation in acreage set aside as wilderness and wilderness-type areas. Nearly 50,000 hardy outdoorsmen visited the wilderness and primitive land which account for over 2 million acres of Wyoming's National Forests.

Big Horn National Forest, with headquarters at Sheridan, includes the mountainous Cloud Peak Primitive Area where numerous lakes and remnants of glaciers are found. The forest features more than 300 lakes and reservoirs, 850 miles of fishing streams, and historic sites such as the prehistoric Indian Medicine Wheel on Medicine Mountain. Saddle and pack trips, hunting, and scenic drives are popular visitor activities, as well as the availability of several resorts and dude ranches.

Bridger National Forest, with headquarters at Kemmerer, includes Bridger Wilderness Area, a favorite of mountain climbers. The area boasts hundreds of granite peaks, including 13,785 foot Gannett Peak, the highest in the State. The forest also offers big game hunting, fishing, and a winter sports area.

Medicine Bow National Forest, with headquarters at Laramie, is a land of spectacular mountain scenery including the Medicine Bow, Sierra Madre and Snow Ranges, Laramie and Pole Mountains, and the Rocks of Vedauwoo. Saddle and pack trips are available, and the forest features three winter sports areas.

Shoshone National Forest, with headquarters at Cody, is the largest in Wyoming and boasts three primitive and two wilderness areas. Some of the largest glaciers in the Nation are located in these wilderness areas. Big game such as grizzly and black bear, mountain sheep, elk, moose, and deer draw venturesome sportsmen. The forest also offers a winter sports area, scenic drives, and fine fishing.

Teton National Forest, with headquarters at Jackson, is noted for its unspoiled back country and big game herds. Skiing is outstanding at the two winter sports areas including Jackson and Teton Pass Ski Runs. The Teton Wilderness Area located in this forest is the summer range for the renowned Jackson Hole elk herd. Activities offered include fishing, hunting, camping, picnicking, and swimming.

National forests available for public enjoyment, in addition to those previously described, include Caribou, Black Hills, Targhee, and Ashly.

Other Attractions

Several State parks, such as Buffalo Bill, Glendo, Guernsey, and Seminoe, offer fishing, boating, and swimming on large reservoirs. Thermopolis Hot Springs State Park contains the world's largest mineral hot springs, producing over 18 million gallons of water daily at 135° F.

A burst of vapor towers 150 feet high as Old Faithful erupts in Yellowstone.

Saratoga Hot Springs State Park, like Thermopolis, is noted for its mineral baths.

The State maintains more than 100 campsites and a multitude of well-marked historic and scenic points of interest. Ayer's Natural Bridge, near Douglas, overlooks a 15-acre amphitheater and fine picnic and camping grounds. Spirit Mountain Cavern near Cody is a natural crystal cave that is still being explored. Hell's Half Acre, The Sinks, Gros Ventre Slide, Teapot Rock, and Tree-in-Rock are evocative names for sites of mysterious and unusual natural phenomena. The town of Cody booms in wild west lore with a gallery of western art, the statue of its son "Buffalo Bill", and dude ranches.

Recreation on Public Lands

Almost endless recreation opportunities await the visitor to public lands in Wyoming. Awe-inspiring mountain ranges, fascinating gorges and canyons, colorful expanses of high desert terrain, and geological forms and shapes of every description await the viewer.

For the seeker of the signposts of history, few areas parallel the role played by public lands in Wyoming. Over these lands roamed the famed mountain men who opened the door to the West—to disputed Oregon and Mexican Territories. The key to this door was South Pass, an easy route over the fearful Rockies, and through it flowed the tide of a growing Nation.

Here the Oregon Trail, Overland Trail, Bozeman Trail, Caifornia and Mormon Trail and other pathways wended their way into the history books. Cooperating with State and county historical groups, the Bureau of Land Management helps mark these historic pathways.

The pony express established its stations throughout most of the southern portion of the State. Ghost towns, such as old Atlantic City, tell of the early days of hardrock mining for gold and coal. Railhead towns blossomed and then withered as the Union Pacific railroad inched its way across southern Wyoming, replacing the Concord stagelines.

For the sportsman, public lands in Wyoming are home for such big game animals as the fleet-footed pronghorn antelope, the stately elk, mountain sheep, moose, and bear. Sage grouse and Chukar partridge supply excellent upland game bird hunting. High mountain lakes and cold, swift-moving streams and rivers are home for wily trout of several species. Fishing access sites to many of the State's water courses have been jointly provided by BLM and the Wyoming Game and Fish Commission.

For the camper, picnicker, hiker, and rockhound, the very spot and surroundings they seek can be found somewhere within the 18 million acres of public land in the State. From secluded aspen groves overlooking a meandering stream—to rocky gorges radiating brilliant hues—to endless rolling plains—to untamed wild rivers, Wyoming's landscape cannot be duplicated.

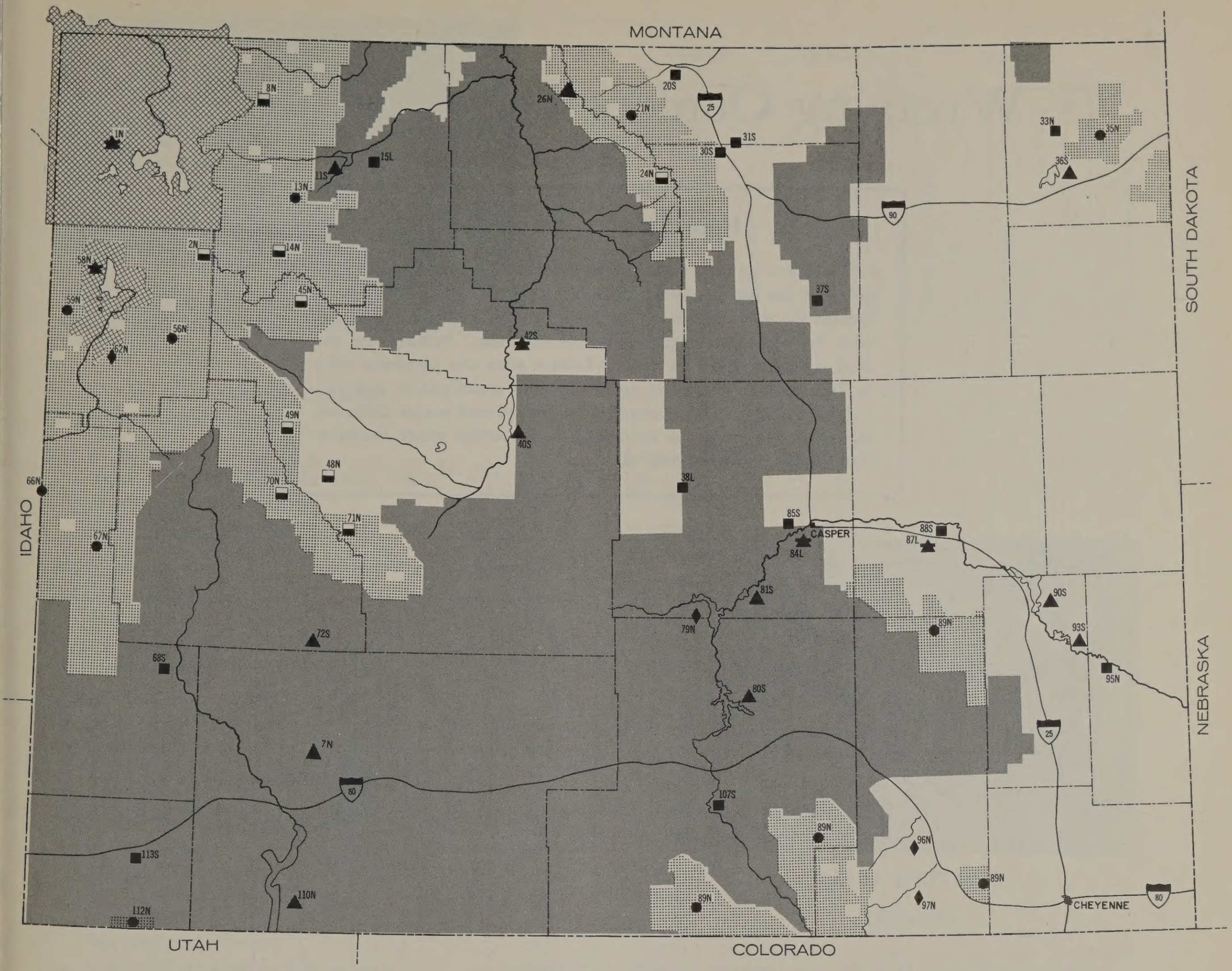
Developed recreation facilities on the public lands are few at present. North of Rock Springs, in southwestern Wyoming, a picnic and rest area on U.S. Highway 187 is almost constantly filled during the spring, summer, and fall months. Camping grounds are shortly to be built at several outstanding scenic public land sites.

Closely located to important public land areas are developed campground, picnic, and rest stops built by State and other Federal agencies. The spectacular Flaming Gorge Reservoir in southwestern Wyoming and the Yellowtail Reservoir Area in northern Wyoming and southwestern Montana encompass many acres of public lands. Both will be national recreation areas, with full development of recreation facilities.

Private Facilities

Privately owned recreation facilities in Wyoming vary from summer camps for boys and girls to fine hunting areas. The State's private crop and grass lands contribute significantly to the supply of outdoor recreation opportunities, and many farmers and ranchers provide tourist accommodations. Others lease or supply hunting opportunities, often in combination with cabin facilities. Camping, picnicking, fishing, hiking, horseback riding, and guide services are also provided.

Lists of all the privately operated recreation facilities in Wyoming are not available from any single source. Travel bureaus and agencies, outdoor clubs, commercial organizations such as gasoline companies, motel and hotel associations, airlines and railroads, and local Chambers of Commerce all can supply information on many of the privately owned facilities. Local inquiry will reveal others. Some information is available from the Wyoming Travel Commission, Capitol Building, Cheyenne, Wyo., 82007.


MONTANA
SOUTH DAKOTA
NEBRASKA
COLORADO
UTAH
IDAHO
CASPER
CHEYENNE
25
90
80
1N
8N
20S
26N
21N
31S
30S
24N
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11S
13N
2N
14N
58N
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93S
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89N
80S
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107S
89N
96N
97N
89N
113S
112N
110N
89N

WYOMING

0 25 50 75
SCALE IN MILES

▩	▨	■
NATIONAL PARK	NATIONAL FOREST	BLM LANDS

	Existing
Park	★
Recreation Area, Etc.	▲
Monument	■
Nature Preserve	◪
Wilderness	⬓
Beach	◠
Wildlife Area	◆
Forest	●

Wyoming Outdoor Recreation Guide

How To Use This Guide

Information on major areas offering recreation in Wyoming is given in the listings on the following pages. Each area can be located on the map at left by matching its number (as 65 N) with the corresponding number on the map. Symbols on the map represent types of areas. Letters after the numbers refer to Federal (N), State (S), local (L), and quasi-public and private (P). Only major interstate highways and major cities are shown on the map. A road map will provide exact routes to those areas you may wish to visit.

	Number on map	Acreage		Type of use				Activities									
		Total land and water within area	Water surface	Day and weekend	Vacation	Out-of-State target	Tourist en route	Picnicking	Hiking and riding	Camping	Boating	Swimming	Fishing	Hunting	Nature study	Winter sports	Wilderness experience
EXISTING AREAS																	
FEDERAL																	
Parks:																	
Yellowstone National Park (Wyoming portion)	1N	2, 039, 217	....	x	x	x	x	x	x	x	x	x	x	..	x	..	x
Grand Teton National Park	58N	302, 443	....	x	x	x	x	x	x	x	x	x	x	..	x	..	x
Recreation area: Flaming Gorge National Recreation Area Project (Wyoming portion)	110N	103, 680	42, 000	x	x	x	x	x	..	x	x	x	x	..	x	..	..
Monuments:																	
Scientific: Devils Tower National Monument	33N	1, 267	....	x	..	x	x	x	x	x	..	..	..	..	x	..	..
Historic: Fort Laramie National Historic Site	95N	192	....	..	x	x	..	..	..	..	..	..	..	..	..	..	..
Forests:																	
Shoshone National Forest	13N	2, 430, 028	....	x	x	x	x	x	x	x	x	..	x	x	x	x	x
Big Horn National Forest	21N	1, 113, 768	....	x	x	x	x	x	x	x	x	..	x	x	x	x	x
Black Hills National Forest (Wyoming portion)	35N	199, 466	....	x	..	..	x	x	x	x	..	..	x	x	x	..	..
Teton National Forest	56N	1, 700, 766	....	x	..	..	x	x	x	x	..	..	x	x	x	x	x
Targhee National Forest (Wyoming portion)	59N	344, 573	....	x	..	..	..	..	x	x	x	..	x	x	x	..	..
Caribou National Forest (Wyoming portion)	66N	7, 829	....	x	..	..	..	..	..	..	..	..	..	x	..	..	..
Bridger National Forest	67N	1, 699, 878	....	x	x	x	x	x	x	x	x	x	x	x	x	x	x
Medicine Bow National Forest	89N	1, 069, 283	....	x	x	x	x	x	x	x	..	..	x	x	x	x	..
Wasatch National Forest (Wyoming portion)	112N	36, 880	....	x	..	..	..	x	..	x	..	..	..	x	x	..	..
Wilderness:																	
Teton Wilderness Area	2N	563, 000	....	x	..	..	..	..	x	x	..	..	x	x	x	..	x
North Absaroka Wilderness Area	8N	359, 700	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x
South Absaroka Wilderness Area	14N	506, 300	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x
Cloud Peak Wild Area	24N	94, 000	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x

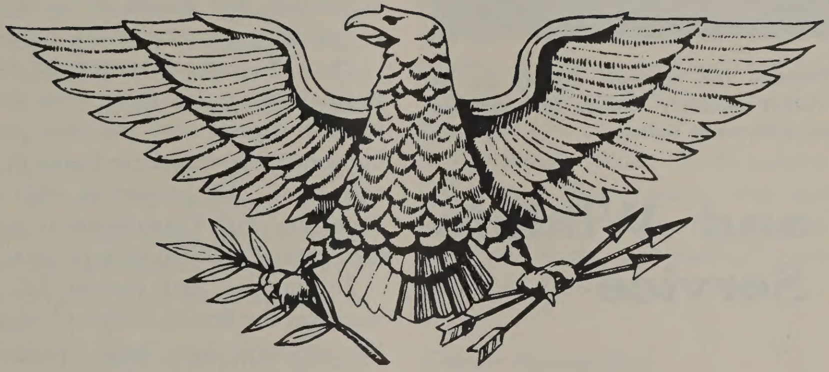
See footnotes at end of table.

	Number on map	Acreage: Total land and water within area	Acreage: Water surface	Type of use: Day and weekend	Type of use: Vacation	Type of use: Out-of-State target	Type of use: Tourist en route	Activities: Picnicking	Activities: Hiking and riding	Activities: Camping	Activities: Boating	Activities: Swimming	Activities: Fishing	Activities: Hunting	Activities: Nature study	Activities: Winter sports	Activities: Wilderness experience
FEDERAL—Continued																	
Wilderness:—Continued																	
Stratified Wilderness Area	45N	147, 000	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x
Wind River Mountains Roadless Area	48N	183, 520	....	x	..	..	..	..	x	x	..	..	x	x	x	..	x
Glacier Wilderness Area	49N	177, 000	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x
Bridger Wilderness Area	70N	383, 000	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x
Popo Agie Wild Area	71N	70, 000	....	x	x	x	..	..	x	x	..	..	x	x	x	..	x
Wildlife areas:																	
National Elk Refuge	62N	23, 790	....	x	..	..	x	..	..	..	..	..	..	..	x	..	..
Pathfinder National Wildlife Refuge	79N	46, 341	22, 000	x	..	..	x	x	..	x	x	x	x	x	x	..	..
Bamforth National Wildlife Refuge	96N	1, 166	500	x	..	..	..	..	..	..	..	..	x	..	x	..	..
Hutton Lake National Wildlife Refuge	97N	1, 968	300	x	..	..	..	..	..	..	..	..	x	..	x	..	..
Public lands (2):																	
Fourteen Mile	7N	5	....	x	..	x	x	x	..	x	..	..	x	..	x	..	..
Five Springs	26N	15	....	x	..	x	x	x	x	x	..	..	..	x	x	..	..
STATE																	
Park: Hot Springs State Park	42S	640	....	x	..	..	x	x	..	..	..	x	..	..	x	..	..
Recreation areas:																	
Buffalo Bill State Park	11S	12, 716	6, 710	x	..	..	x	x	..	x	x	x	x	..	x	..	..
Keyhole State Park	36S	14, 324	9, 418	x	..	..	..	x	..	x	x	..	x	..	x	..	..
Boysen State Park	40S	42, 366	19, 660	x	..	..	x	x	..	x	x	x	x	..	x	..	..
Big Sandy State Park	72S	5, 180	2; 500	x	..	..	..	x	..	x	x	..	x	..	x	..	..
Seminoe State Park	80S	37, 944	20, 050	x	..	..	..	x	..	x	x	..	x	..	x	..	..
Alcova State Park	81S	6, 120	2, 500	x	x	..	x	x	..	x	x	x	x	..	x	..	..
Glendo State Park	90S	24, 036	12, 500	x	..	..	x	x	..	x	x	x	x	..	x	..	..
Guernsey State Park	93S	9, 200	2, 386	x	..	..	x	x	..	x	x	x	x	..	x	..	..
Monuments: Historic:																	
Connor Battlefield State Park	20S	12	....	x	..	..	x	x	..	..	..	..	..	..	..	..	..
Fort Phil Kearny Historic Site	30S	3	....	x	..	..	x	..	..	..	..	..	..	..	..	..	..
Fort Reno Historic Site	37S	14	....	x	..	..	..	..	..	..	..	..	..	..	..	..	..
Names Hill Historic Site	68S	4	....	x	..	..	x	..	..	..	..	..	..	..	..	..	..
Red Buttes Battlefield	85S	30	....	x	..	..	x	..	..	..	..	..	..	..	..	..	..
Fort Fetterman Historic Site	88S	40	....	x	..	..	x	..	..	..	..	..	x	..	..	..	..
Platte River Crossing	107S	8	....	x	..	..	x	..	..	..	..	..	..	..	..	..	..
Fort Bridger State Park	113S	37	....	x	..	..	x	x	..	..	..	..	..	..	..	..	..
MAJOR LOCAL																	
Parks:																	
Casper Mountain Park	84L	480	....	x	..	..	x	x	x	x	..	..	..	..	x	x	..
Ayer's Natural Bridge	87L	14	....	x	..	..	x	x	x	x	..	..	x	..	x	..	..
Monuments: Scientific:																	
Spirit Mountain Cavern	15L	210	....	x	..	..	x	x	..	..	..	..	..	..	x	..	..
Hell's Half Acre	38L	320	....	x	..	..	x	..	..	..	..	..	..	..	x	..	..

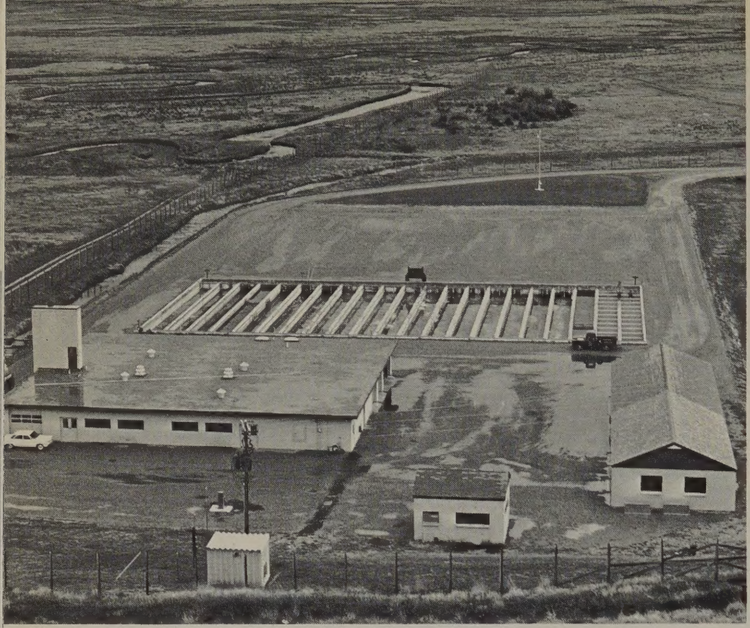
(2) *Recreation areas on lands administered by the Department of the Interior's Bureau of Land Management.*

Trapper John Colter discovered the scenic wonders of Yellowstone and it became the world's first National Park in 1872.

Programs of Federal Natural Resource Agencies



The natural resource functions of the Federal agencies represented in this booklet are extensive and detailed and are only briefly described. Additional information can be obtained by contacting the offices noted in the following programs section.



The Jackson National Fish Hatchery located on the National Elk Refuge produces rainbow and cutthroat trout for stocking in Wyoming waters.

Fish and Wildlife Service

The Department of the Interior's Fish and Wildlife Service manages two national fish hatcheries and four wildlife refuges in Wyoming and conducts numerous other programs to protect and improve the State's fish and wildlife resources. The Service carries out most of its functions in Wyoming through its Bureau of Sport Fisheries and Wildlife.

In producing fish at the Jackson and the Saratoga National Fish Hatcheries, the Bureau of Sport Fisheries and Wildlife cooperates in the Wyoming Game and Fish Commission's stocking programs. Jackson Hatchery produces over 40,000 pounds of fish annually to stock streams and lakes of nearby national forests, Grand Teton National Park, and the Wind River Indian Reservation. Saratoga Hatchery, in its 50th year of operation, provides several species of trout for waters in southern Wyoming and Colorado. Saratoga played an important role in stocking Flaming Gorge Reservoir with three-quarters of a million rainbow trout fingerlings.

Three of the four Wyoming national wildlife refuges—Hutton Lake, Bamforth, and Pathfinder—are prime feeding, breeding, and resting grounds for waterfowl. Pathfinder refuge is particularly significant as a breeding ground for the rare Great Canada goose. The National Elk Refuge, established to provide a winter feeding area for the large Jackson Hole elk herd, is also host to trumpeter swans and other migratory birds.

Under agreement with the Wyoming Department of Agriculture, the Bureau of Sport Fisheries and Wildlife has a predator and rodent control program to prevent or minimize economic losses to domestic and wild animals, and agricultural crops. Wyoming provides an excellent outdoor laboratory for Bureau research into the effects of pocket gophers on range vegetation, and studies are underway on the use of herbicide spraying to deter gophers.

The U.S. Game Management Agent stationed in Cheyenne is concerned with the enforcement of Federal game laws and with problems arising in connection with the federally protected migratory birds. He cooperates with the Wyoming Game and Fish Commission in migratory game bird surveys and banding projects.

To improve and protect fish and wildlife resources the Bureau of Sport Fisheries and Wildlife conducts river basin studies in areas for which federally sponsored water developments are planned. Bureau specialists have reviewed Bureau of Reclamation plans for the Yellowtail Unit of the North Platte River Basin, and various units of the Colorado River storage project. Local flood protection projects of the Corps of Engineers are also reviewed for effects on fish and wildlife.

Sport Fishing

Wyoming is one of five States sharing in the fish and wildlife management programs conducted under the Colorado River Storage Project Act. To enlarge sport fish populations in Flaming Gorge Reservoir, Bureau and State specialists chemically treated the Green River and tributary streams as a measure to reduce "trash fish" populations. This ambitious program, carried out by Wyoming and Utah in partnership with the Bureau of Sport Fisheries and Wildlife, contributed materially to the excellent trout fishing available in Flaming Gorge.

A 6-year study of the Flaming Gorge Reservoir Fishery is planned, along with the establishment of a national wildlife refuge for waterfowl, installation of devices to prevent losses of game fish in canals, installation of pool-forming structures to protect fish in the Black Forks River, and acquisition of big game lands in connection with the Lyman reclamation project.

Research

One of the Bureau's newest activities in Wyoming centers around the fish genetics laboratory being built on historic Ranch A near Beulah. When in full operation, the laboratory's facilities will permit study of a hundred different strains of trout in breeding programs.

Research work at the ranch will include fish-pesticide studies to determine whether one strain of fish is more resistant to pesticides than another. This research is aimed at eventual propagation of more resistant strains for stocking State waters.

Wyoming cooperates in the Federal aid program for fish and wildlife resources. It was with the assistance of Federal aid funds that the State restored its depleted herd of antelope, now one of the most important big game animals to Wyoming hunters.

Federal aid funds are used in wildlife investigations, management of waterfowl and game animals, acquiring and developing wildlife lands, constructing hunter access roads, and developing and operating big game and waterfowl areas. Fish restoration funds are used to aid research on diseases and ecology of trout, and to construct fishing lakes, access roads, parking areas, and other public facilities.

Further information on the Fish and Wildlife Service can be obtained from the Regional Office of the Bureau of Sport Fisheries and Wildlife, 517 Gold Avenue, S.E.P.O. Box 1306 Albuquerque, N. Mex., 87103.

Bureau of Land Management

The Bureau of Land Management (BLM) is responsible for over 18 million acres of public land and resources in Wyoming. Under the Classification and Multiple Use Act of 1964, BLM is directed to classify its land for retention or disposal. Retained lands are managed under multiple use principles for watershed protection, outdoor recreation, fish and wildlife development, grazing, timber and mineral production, and other uses.

A major job for BLM in Wyoming is grazing administration. In 5 grazing districts covering more than 13 million acres, over 1,200 ranchers graze some 1,340,000 head of livestock. In addition, on about 3 million acres of rangeland outside grazing districts, 2,000 leases were issued for 871,000 head in a recent year.

BLM coordinates its grazing administration with soil and moisture conservation, range improvement, and weed control. In this way it works to restore depleted public lands to peak productivity, to rehabilitate lands damaged by erosion, and to control runoff of surface water.

Public lands are habitat for more than 200,000 antelope, deer, elk, and other big game animals in Wyoming. While the Wyoming Game and Fish Commission manages this resource, BLM works closely with the Commission to provide the food, water, and shelter needed by Wyoming's wildlife on public lands.

Timber Management

BLM manages public land forest resources under sustained-yield principles. Merchantable timber covers about 450,000 acres of BLM lands in Wyoming, and woodlands constitute another 580,000 acres. BLM harvests mature trees through timber sales and reforests areas capable

BLM technicians are responsible for the balanced use of millions of acres. Their duties include watershed protection, forest management, and fire protection.

of producing merchantable timber. It also conducts a timber access road program to open large, isolated blocks of public timber for harvesting.

Among other resource protection activities in Wyoming, BLM has developed a control unit to stem infestations of the Black Hills bark beetle and the mountain pine beetle which threaten commercial timber stands in several locations throughout the State. In its fire protection work, the Bureau combats fire on public lands and on State and private holdings near public lands.

Land Uses

The expanding Interstate Highway System, power and communications systems, pipelines, access roads to missile sites, locations for television repeater stations, and irrigation canal easements all present increasing needs for rights-of-way on public lands. Rights-of-way across public land granted by BLM under certain laws often play an essential part in such developments.

Large quantities of valuable minerals underlie the public lands. The BLM Land Office in Cheyenne issues several hundred oil and gas leases each month. More than 40,000 active leases returning over $40 million annually were on record in a recent year. Oil and gas revenues produced from public lands in Wyoming exceed those from public lands in any other State.

Besides minerals on the public domain, BLM administers minerals on another 9.5 million acres of National Forests and Bureau of Reclamation withdrawn land, and on 12 million acres of patented land.

BLM's resource management job depends on these engineering functions: mapping, cadastral surveying, communications, and the design and construction of water control structures, buildings, and roads.

In recent years BLM has been conducting an inventory in Wyoming to identify public land areas with outdoor recreation value. This information is available to State and local governments and private, nonprofit organizations. Under the Recreation and Public Purposes Act, qualified organizations may purchase or lease public land tracts suitable for recreation programs.

BLM's Wyoming State Office is in Cheyenne. Field offices in management districts are located at Rawlins, Rock Springs, Pinedale, Lander, Worland, and Casper.

Additional information on the programs of the Bureau of Land Management in Wyoming can be obtained from the State Director, Bureau of Land Management, Federal Recreation Building, 2002 Capital Avenue, Cheyenne, Wyo., 82001.

Bureau of Indian Affairs

The Wind River Reservation in west-central Wyoming is the only reservation in the State and the home of more than 3,000 Indians. It is a land of great variety, ranging from level river terraces to steep mountains and is shared by two tribes of Plains Indians who once were bitter enemies.

The Arapaho first joined the Shoshone on the reservation in 1878. There has been little intermixture of the two groups, however, and they are of different linguistic stocks. Of the two, the Shoshone have been more rapidly assimilated into the non-Indian population.

Today, the Shoshone occupy the south-central, western, and northern portions of the reservation, with settlements at Fort Washakie, Wind River, and Crowheart. The Arapaho live mainly in the southeastern part, with settlements at Ethete, Arapaho, and St. Stephens.

Reservation boundaries enclose over 2,268,000 acres of which more than 83 percent—over 1,887,000—acres are Indian owned. The balance is land owned by non-Indians, Government agency reserves, and land leased to the tribes.

Each tribe elects a six-member business council by popular vote, but most important tribal matters are considered at annual meetings of the General Councils where all tribal members may speak and the majority decision rules. Business common to both tribes is handled through a Joint Council. The affairs of the two tribes are not completely integrated, and each carries on its own income-producing enterprises. Fort Washakie on the reservation is the Tribal Headquarters and the headquarters of the Bureau of Indian Affairs' Wind River Agency.

Bureau programs generally aim at helping the

Indians of Wyoming conserve and develop both human and natural resources. Currently the Bureau is assisting the tribes with plans for economic development of their reservation, and with community services such as education, employment assistance, welfare services and law enforcement.

Employment and the Economy

The total annual income for both tribes exceeds $4 million and for some time the greater part has been derived from oil and gas leases to commercial operators. Much of this income is distributed on a monthly, per-capita basis to enrolled tribal members while the rest goes to funds for projects that will benefit the whole Indian community.

The monthly per capita payment averages $64 for Shoshones and $49 for Arapahoes. It has been a mixed blessing. On the one hand, the payment accounts for most of the new homes and such comforts as are to be seen at Wind River. Many Indians, however, depend solely on this unearned income, and it is not sufficient for their needs.

Both tribes have encouraged individual livestock enterprises through cash loans for cattle purchases. The Arapaho operate their own beef-breeding enterprise that employs a paid manager and controls an average herd of 7,000 head of cattle. Net income for the past years has averaged $142,000 and enrolled members of the Arapaho tribe share in the profits. The annual payroll to employees, mainly Arapahoes, averages over $70,000.

Most Indians are now using the same credit sources which serve non-Indians of the area. The Arapaho tribe has a credit program of low interest loans for tribal members. Shoshones may borrow money from a local bank and the tribe will guarantee 80 percent of the loan.

Not all the Indians on the Wind River Reservation care to continue in the traditional occupations of agriculture and stockraising. Yet, other opportunities in industry and business are extremely limited in the area. The Bureau of Indian Affairs strives to improve this situation through a program of vocational training and employment assistance that has been conducted at Wind River since 1961. The program's goal is to help Indians become self-sufficient wage earners in permanent jobs. Families and individuals who wish to relocate off the reservation are helped to find jobs, to acquire needed skills and to resettle in communities where employment opportunities are more readily available. Since the program began, 161 people have received adult vocational training to prepare them for jobs and 106 have had direct assistance in finding employment.

Education

Today, twice as many Indian children are educated in public schools as attend federally operated schools. Wyoming is one of the States where public schools have taken over this responsibility with Bureau financial assistance, provided under the 1934 Johnson-O'Malley Act by contracts with local school districts.

Each year an increasing number of Indian boys and girls attend colleges or universities with financial help through scholarships provided by the Arapaho and Shoshone tribal organizations.

Programs in adult education were provided on the reservation last year. These programs provide or improve basic education and deepen understanding of life in modern society both on and off the reservation.

Health and Welfare Services

In spite of a regular tribal income, poverty continues on the Wind River Reservation. The tribes finance a small-scale assistance program for their members. In addition, Bureau personnel provide child welfare services and make counseling and guidance available to Indians with serious problems.

The Irrigation Branch of BIA has the large task of building irrigation structures on reservation land.

At Fort Washakie, the Public Health Service operates a fully staffed Health Center that is equivalent to the outpatient department of a hospital. A Health Station is maintained at Arapaho where clinics are held and other services provided periodically. For complete hospitalization, Indian patients are sent to one of the large off-reservation hospitals in the area.

Law and Order

The Bureau of Indian Affairs assists the tribes in their law-enforcement program by participating in the costs of maintaining law and order. The tribes at Wind River maintain their own police force on the reservation. They have purchased police cars and have provided a jail, clerical assistance, a tribal judge and a police court.

Wind River Development

Through Technical assistance, the Bureau strives to help the tribes make more effective use of their natural resources. Projects in soil and moisture conservation, irrigation projects, road construction and maintenance are aimed at creating jobs and improving the reservation. Recently, construction of a municipal center at Fort Washakie provided needed employment for the tribes, as well as a new jail, council room, courtroom, offices and space for business, educational and social uses.

With Bureau encouragement and advice the tribes are now planning further development of more than 257,000 acres of accessible commercial timber on their lands.

The Shoshone and Arapaho are also considering further promotion of the reservation's relatively untapped potential as a recreational area. Although hunting is permitted to enrolled tribal members only, fishing permits for certain streams are issued to non-Indians. The income from this source has exceeded $10,000 in recent years. With its thousands of acres of scenic attractions, sparkling streams, natural hot springs, and a variety of Indian ceremonials and social events, the reservation offers endless appeal for visitors.

Additional information about the Arapaho and Shoshone Indians on the Wind River Reservation may be obtained from the Wind River Agency, Fort Washakie, Wyo., 82514.

Bureau of Mines

Programs of the Department of the Interior's Bureau of Mines touch on virtually every kind of mineral found in mineral-rich Wyoming. The work is concentrated in the three principal areas of technological research, resource economics, and health and safety. In accomplishing their mission, Bureau experts cooperate with State and local representatives and with industry to help assure wise development and use of Wyoming's underground riches and to aid in safeguarding the lives and health of those who extract and process her minerals.

Petroleum Research

The mineral economy of Wyoming centers around petroleum, and some of the most beneficial research performed by the Federal Government in the State is conducted at the Bureau's Petroleum Research Center in Laramie. Work there is concentrated on petroleum production, petroleum processing and use, and oil-shale investigations.

Petroleum production in Wyoming depends partly on secondary recovery systems—methods of pumping water or gas into underground petroleum reserviors to supplement depleted natural pressures that force the oil from the porous reservoir rock and into producing wells. Many aspects of secondary recovery are under study at the Laramie Petroleum Research Center, with special emphasis on waterflooding.

Petroleum processing and utilization research at Laramie is carried out in three main areas: (1) studies of the properties of crude oils; (2) studies of the undesirable sulfur and nitrogen compounds found in certain crudes; (3) basic research on the composition of petroleum asphalt, aimed at more effective use of this product.

Oil-Shale Investigations

The Laramie Center contains the world's best-equipped laboratory for research on oil-shale resources, oil-shale retorting and refining, and related fields. An important new source of data on utilization of this resource will be provided to Laramie scientists with reactivation of the Bureau's experimental oil-shale mine and retorts at Anvil Points, Colorado. Placed in standby status since 1956, the Anvil Points installation was reopened in 1964 and leased for research by private firms that are vitally interested in the commercial possibilities of oil-shale. Under terms of the leasing agreement, the Bureau has complete access to all research findings. Hence, the industry studies at Anvil Points will be an important supplement to more basic studies in the Laramie laboratories.

Coal Research

Research at Bureau laboratories in Denver, Colorado, and Grand Forks, N. Dak., is yielding valuable information that can contribute to the wise development and use of Wyoming's substantial coal reserves, and the reserves of other Western States. Of special significance to Wyoming are studies on the carbonization of subbituminous coal—a plentiful State resource—to produce char for metallurgical fuel, and tar for use as a raw material in the petroluem refining industry. Success in this work would also reduce Wyoming's dependence on high-cost Eastern coals now needed to form blends for use use in coke ovens.

Metals

The technical feasibility of recovering aluminum oxide from the vast anorthosite reserves of Wyoming's Laramie Range has been demonstrated at a Bureau of Mines pilot plant. Although not economically competitive under today's conditions, the Bureau's method for obtaining a source of aluminum metal from plentiful resources of this aluminum-silicate rock stands ready for the day when this valuable resource must be tapped.

Bureau metallurgical laboratories outside Wyoming make constant contributions to knowledge of its metal resources. Recent activities include work on pelletizing taconite iron ore of the type found in Wyoming, and development of ways to process Wyoming uranium ores so as to increase both the quantity and quality of uranium metal that can be extracted from them.

Health and Safety Activities

Health and safety work by the Bureau in Wyoming involves the training of mineral-industry personnel in first-aid methods, mine rescue techniques, and accident prevention, as well as the investigation of mine fires, explosions, accidents, and general safety conditions at coal mines. The Bureau of Mines gives special assistance to mine operators on safety problems involved in the selection and use of proper equipment, and on ventilation and ground-support methods.

Statistical Reporting and Mineral Resources Studies

The gathering and publication of statistical and economic information on Wyoming's mineral industry is an important Bureau function in the State. As a guide for industry and Government, statistics are regularly compiled on the quantity and value of every mineral and mineral fuel produced in Wyoming, on the volume and value of mineral production by counties, and on employment and injuries in the mineral industries. Resource-evaluation studies include appraisal surveys of potential commercial sources of needed minerals; investigations of mineral resources in specific areas; methods and costs studies of typical mineral operations; and inventories of known resource commodities.

A small Mineral Resource Field Office is maintained in Laramie to further this work. The Area V Mineral Resource Office, Building 20, Denver Federal Center, Denver, Colo., 80225, is the headquarters for the five-State resource area that includes Wyoming.

Uranium is the most important metal mined in terms of annual product value. This tower conceals a shaft of an underground mine in the Shirley River Basin.

Office of Minerals Exploration

Wyoming's private mining interests have participated actively in the minerals exploration assistance program which was introduced in 1951 under the Defense Minerals Administration and has been continued since 1958 under the Office of Minerals Exploration in the Department of the Interior. Under the program, the Federal Government assists private industry in domestic minerals exploration by financing 75 percent of the cost of domestic mineral exploration for silver and 50 percent of the cost of exploration for all other mineral commodities listed in the OME regulations.

During the first 12 years of this program, exploration work valued at more than $1.1 million was authorized on 23 projects in Wyoming. The Federal Government financed $323,000 of the exploration cost. Discoveries have been certified on 14 of these projects. The principal minerals sought were iron, sulfur, tungsten, and uranium.

Information about this program can be obtained by writing to the Field Officer, OME, Region III, Building 20, Denver Federal Center, Denver, Colo., 80225, or to the Office of Minerals Exploration, Geological Survey, Department of the Interior, Washington, D.C., 20240.

National Park Service

Under a continuing long-rang development and improvement program for all units of the National Park System, projects are underway or planned for the areas administered by the National Park Service in Wyoming.

Present plans for Grand Teton National Park call for reconstruction of the North-Approach Road to Yellowstone National Park, of the Gros Ventre Road, and general roadwork in other parts of the park, including campgrounds and trailer lots. In the Colter Bay area, 75 more sites will be added to the campground, a marina comfort and life station will be installed, and more interpretive facilities are to be added to the visitor center. At the South Park Campground, a water and sewer system, comfort stations, and access roads and parking area will be constructed. Work planned for the Gros Ventre area includes campground development, an amphitheater, rehabilitation of the ranger station, and improvement of roads and parking.

At Yellowstone National Park, boat docks, an amphitheater, comfort station, ranger patrol station, and trails and walks will be constructed at the new development of Grant Village. Major bridges will be rehabilitated; the road from Madison Junction to Firehole Canyon, the West Entrance Road, and the Grand Loop will get their final surfacing. Other roads, walks, and trails will be reconstructed, and improvements will be made on numerous visitor, utility, and sanitary facilities.

At Devils Tower National Monument, a water distribution system will be built, and the Tower Trail and visitor center walks will be surfaced.

At Fort Laramie National Historic Site, major improvements include archeological salvage and research, utilities, roads, and walks.

At Big Horn Canyon Recreation Area, a temporary campground and picnic facilities will be built; access roads to the picnic and camping area at Horseshoe Bend and Kane Bridge will be constructed. A visitor center will be built and will include audiovisual facilities and interpretive exhibits.

At Flaming Gorge National Recreation Area, work will continue at the Green River District Headquarters Site, including a water and sewage system, circulatory roads, parking, drives, walks, sign and markers, and ground improvement. An access road, parking and a water system will be consructed at the Buckboard Crossing; and temporary camping facilities are to be built throughout the recreation area.

Work at Fontenelle Reservoir Recreation Area includes shoreline development, walks, driveways, and trails.

Further information about units of the National Park System in Wyoming may be

obtained by writing to the Superintendent of the following: Grand Teton National Park, Box 67, Moose, Wyo., 83012; Yellowstone National Park, Yellowstone National Park, Wyo., 83020; Devils Tower National Monument, Devils Tower, Wyo., 82714; Fort Laramie National Historic Site, Fort Laramie, Wyo., 82212; Big Horn National Recreation Area, Box 2553, Billings, Mont., 59101; Flaming Gorge National Recreation Area, Box 188, Dutch John, Utah; Fontenelle Recreation Area, Box 608, Kemmerer, Wyo., 83101.

Bureau of Outdoor Recreation

The Department of the Interior's Bureau of Outdoor Recreation administers a program of grants-in-aid available to all States for outdoor recreation planning, acquisition, and development. Authorized by the Land and Water Conservation Fund Act of 1965, this program provides Federal matching funds for State and local outdoor recreation projects. The Land and Water Conservation Fund derives moneys from "pay-as-you-go" user fees and entrance charges at Federal recreation areas, sale of surplus Federal property, a Federal tax on motorboat fuels, and advance appropriations.

The Bureau of Outdoor Recreation provides technical assistance to Wyoming and other States in planning necessary for participation in the 50–50 matching fund program. These plans provide guidelines for future outdoor recreation developments by individuals, private organizations, cities, counties, and various units of the State government.

Other important duties of the Bureau of Outdoor Recreation are to cooperate with the State on outdoor recreation matters, promote coordination in Federal outdoor recreation programs, and develop a long-range, continuing nationwide outdoor recreation plan based on State, Federal, regional, local, and private plans. The Bureau manages no lands or recreation facilities.

The Governor of Wyoming has designated Mr. James B. White, Commissioner, Wyoming Game and Fish Department, Cheyenne, Wyoming to serve as liaison for the State in working with the Bureau of Outdoor Recreation.

Additional information on the Bureau may be obtained from Mr. Wilfred Dresskell, Regional Director, Bureau of Outdoor Recreation, Mid-Continent Region, Hartford Building, 7860 West 16th Avenue, Denver, Colo., 80215.

Bureau of Reclamation

For 60 years, the Department of the Interior's Bureau of Reclamation has constructed projects in Wyoming that have meant multiple benefits for the State. Dams to control rivers and generate power, reservoirs to store water and provide recreation, and canals to carry water to farms and cities—these are some reclamation developments that harness Wyoming's water resources.

Bureau of Reclamation multipurpose projects such as those on the Shoshone and North Platte Rivers have transformed thousands of acres of land into productive farms. The area irrigated by the pioneer Shoshone project in north-central Wyoming, once sagebrush flats, has produced over $117 million in crops alone since irrigation began in 1908. The principal storage feature of the project, Buffalo Bill Dam and Reservoir, also serves as a source of water for the Shoshone and Heart Mountain hydroelectric powerplants.

The North Platte project in eastern Wyoming, another early water development, nurtures nearly 71,000 acres of irrigable land which has been estimated to be some seven times more valuable per acre than the average adjacent dryland. During the period 1908–63, North Platte project farms have produced crops bearing a gross value of more than $136 million. Water for irrigation, power and flood control is regulated by the project's Pathfinder and Guernsey dams. Fish and wildlife and recreation opportunities are also important features of the reservoirs.

The Kendrick project, on the North Platte River in central Wyoming, includes Seminoe and Alcova dams and powerplants. Reservoirs behind these two dams store water to irrigate nearly 24,000 acres of land. Other Wyoming projects include the Riverton project in the Wind River Basin and the Eden irrigation project in southwestern Wyoming with water storage at Big Sandy Dam and Reservoir and at Eden Reservoir.

Boysen Dam, completed in 1952, was one of the first multipurpose developments constructed as a part of Reclamation's Missouri River Basin Project.

Colorado River Storage Project

The Bureau's Flaming Gorge Dam near the Wyoming-Utah border, a key feature of the vast Colorado River storage project, has created a huge reservoir for water storage and power use with the accompanying benefit of outstanding water-based recreation. Wyoming receives a share of the power generated at Flaming Gorge and from that generated at the other Colorado River storage projects. Under provisions of Colorado River Storage Project Act of 1956, the revenues derived from the sale of electric energy produced at all of the storage project powerplants are pooled and used to repay the costs of the storage units. These revenues also assist in the development of participating projects which will assure steady growth of irrigation agriculture in the Upper Colorado River Basin.

The Seedskadee and Lyman projects in Wyoming are already under construction as participating projects. The Savery-Pot Hook project, partially in Wyoming and partially in Colorado, is among those authorized for Federal construction.

Missouri River Basin

As part of the Missouri River Basin project, a major step in the development of Wyoming's water resources, the Bureau has built the multiple-purpose Boysen Dam, Reservoir, and Powerplant. Boysen provides irrigation water, up to 15,000 kilowatts of power, recreation, and fish and wildlife benefits. Boysen Reservoir serves the farmlands of the Worland area in the Big Horn Basin through a system of canals, laterals, and pumping plants, and provides supplemental water to land in the Lucerne area.

Cortes Dam, Reservoir, and Powerplant located on the North Platte River approximately 2 miles downstream from Seminoe Dam, was the first unit initiated by the Bureau of Reclamation under the Missouri River Basin project. Cortes Powerplant provides 36,000 kilowatts of power. In addition to power, the Cortes Unit also provides limited recreation and fish and wildlife benefits.

The Glendo Unit of the Missouri River Basin project is a multiple-purpose development located on the North Platte River in central and eastern Wyoming. The principal features of the unit are: Glendo Dam, Reservoir, and Powerplant near the town of Glendo; Fremont Canyon Powerplant, at the upper end of Alcova Reservoir; and Gray Reef Dam and Reservoir, just downstream from Alcova Dam.

It provides 24,000 kilowatts of power, recreation, flood control, fish and wildlife benefits, plus supplemental irrigation water for private irrigation districts. The Fremont Canyon Powerplant has an installed capacity of 48,000 kilowatts. Gray Reef Dam provides a small reservoir to re-regulate releases from Alcova Powerplant.

Yellowtail Dam and Powerplant, another unit of the Missouri River Basin project, is under construction near the mouth of Big Horn Canyon in Montana. The canyon ends about 4½ miles south of the Wyoming-Montana boundary and there the reservoir will reach its maximum width of 2 miles. Although the project is designed for irrigation, power generation, and flood control, the Reservoir will also be developed into a recreational area of national significance. It will be about 71 miles long, more than half of it lying within the rugged, picturesque canyon.

The Minidoka project, which supplies irrigation water for Idaho, includes Jackson Lake and Grassy Lake storage in Wyoming. The 25,000-acre Jackson Lake, located within the boundaries of the Grand Teton National Park, has become one of the prime recreational sites in the State. The Bureau of Reclamation makes every effort to operate it at optimum levels for recreational purposes during the tourist season. Jackson Lake Dam regulates the flow of the Snake River for the fishermen and the very popular float trips during the summer months. From about the middle of October until Feruary a fairly constant level is maintained in the lake to provide for the spawning of mackinaw trout.

The primary purpose of the Palisades project, completed in 1958, is to provide holdover storage for release in dry years to lands of the Upper Snake River Valley. The dam, located 11 miles west of the Idaho-Wyoming boundary, forms a reservoir which extends over the State line into Lincoln County, Wyoming. Although the lake is used heavily for camping, picnicking, boating, and fishing, its chief value to Wyoming stems from regulation of the Snake River, thus decreasing the necessity for fluctuating Jackson Lake some 75 miles upstream. The Palisades project also provides substantial flood control benefits and its powerplant supplies power to a rural electric cooperative operating in western Wyoming.

The 88th Congress authorized the Savery-Pot Hook project, a participating unit of the vast Colorado River Storage project. This proposed development, astride the Wyoming-Colorado State line, would furnish supplemental water for about 10,000 acres of Wyoming land and a full supply to approximately 6,000 acres.

Transmission

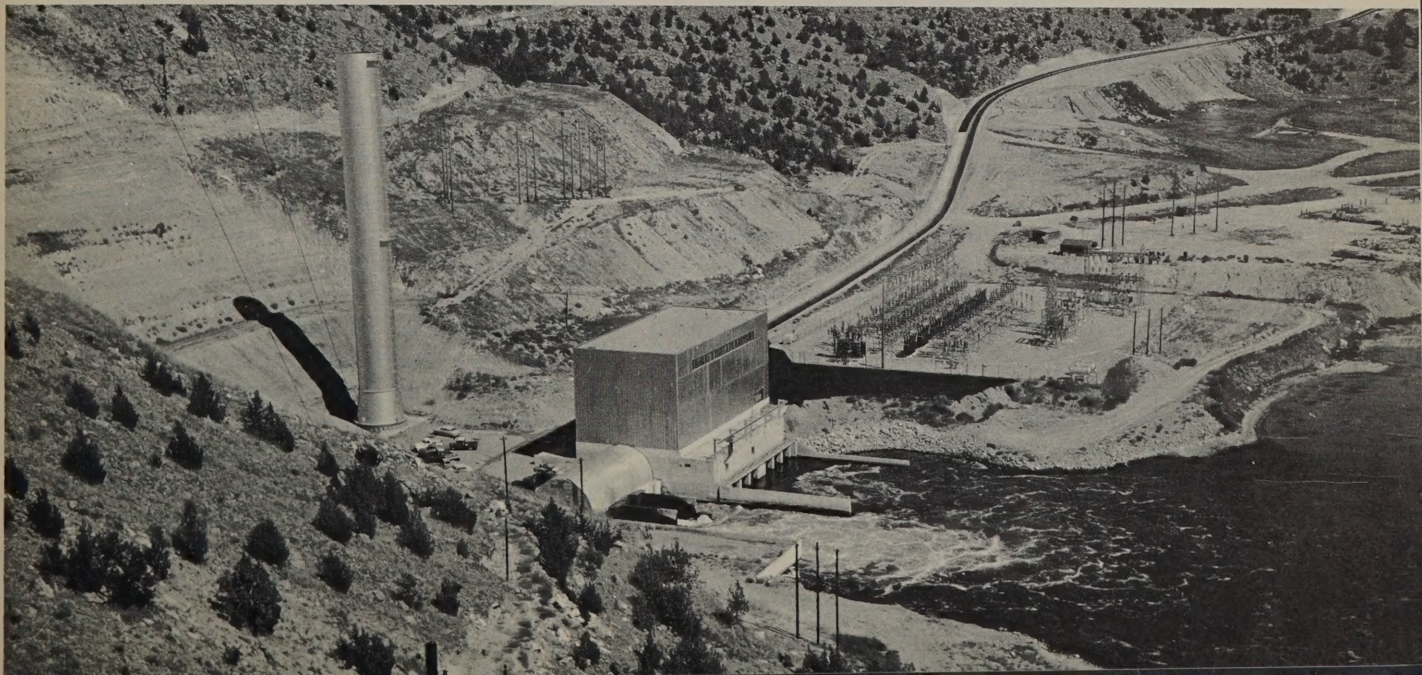
The Transmission Division of the Missouri River Basin project is the transportation system for all of the electric power generated at Bureau of Reclamation powerplants in this project.

The Transmission Division in Wyoming furnishes power to Federal authorities, public bodies, rural electric cooperatives, and privately owned power companies. This is accomplished by interconnection with private transmission lines within the State, and bureau and private lines in surrounding States.

The Bureau in Wyoming now operates approximately 1,767 miles of transmission lines with capacities ranging from 4,160 to 115,000 volts with approximately 215 miles of 115-kilovolt and 230-kilovolt lines under construcion.

Additional information on Projects of the Bureau of Reclamation in Wyoming can be obtained by writing to the following field offices: Bureau of Reclamation, Region IV, Post Office Box 11568, Salt Lake City, Utah, 84100; Bureau of Reclamation, Region VI, Post Office Box 2553, Billings, Mont., 59101; Bureau of Reclamation, Region VII, Building 46, Denver Federal Center, Denver, Colo., 80225; Bureau of Reclamation, Post Office Box 937, Boise, Idaho, 83700.

Water reaches the Glendo Powerplant through a tunnel 21 feet in diameter. The 3/4-mile tunnel descends through the hill from Glendo Dam and Reservoir located around a horseshoe bend of the North Platte River.



This canyon, whose walls reveal seven successive ages of geologic hictory, is an actual outdoor classroom.

Geological Survey

The Geological Survey of the Department of the Interior conducts geological studies, prepares geologic and topographic maps, investigates mineral and water resources, and supervises some mineral leasing on Federal lands in Wyoming. Geologic, geophysical, and geochemical studies are aimed at increasing knowledge of Wyoming's different mineral resources and of the composition, structure, and history of the rocks of the region.

Field mapping is supplemented by specialized laboratory techniques to determine the exact composition and microscopic texture of rocks, revealing much more about how rocks were formed than can be seen in the field. Studies of the chemistry and physics of minerals and rocks provide further information on the processes by which the earth was formed and by which it is continually being modified.

Geologic maps produced by these basic field and laboratory studies show what kinds of rocks are exposed at the earth's surface and the probable shapes and structures of underground formations. Such maps help determine locations, depths, and dimensions of valuable bodies of rock (such as ores or building stone), and areas where valuable minerals might be sought. The maps also chart the depth of potential water-bearing or oil-bearing beds, and they indicate the distribution of favorable or unfavorable rock sites for construction of buildings, dams, bridges, or tunnels.

The Geological Survey also conducts research in economic geology—the geology of mineral and mineral-fuel resources—which attempts to outline areas in known mining districts where there may be additional mineral deposits, to locate new areas favorable for the occurrence of concealed deposits, and to develop new tools and new methods of exploration.

Water Investigations

Water resource investigations by the Geological Survey in Wyoming determine and describe the location, quality, and quantity of water resources. Water underground, in streams, and in natural and manmade lakes is studied for information needed to solve problems related to water supply, distribution, and quality. The Geological Survey cooperates with State, municipal, and other Federal agencies in many water resource investigations, including studies of underground water supplies during droughts, the chemical quality of water, changes in underground storage of water, water levels in wells, streamflow, and sediment content.

The Geological Survey studies the movement of water into mining areas as part of its nationwide mining hydrology studies. The studies provide data for effective conservation and management of mineral resources. An investigation of an area of 500 square miles of classified public land in Sweetwater County underlain by trona (anhydrous sodium carbonate) will provide data indicating that water in the formations above and below the soluble trona can be controlled to permit more complete extraction and more efficient mining. The investigation will provide data by which decisions affecting management of surface and groundwater reservoirs and their relationship to mining operations can be developed.

Topographic Mapping

The Geological Survey has topographically mapped Wyoming in the 1:250,000 series (1 inch equals about 4 miles). The State and the Survey cooperate in the mapping program and quadrangles to be mapped in more detail are selected by mutual agreement between the Geological Survey and the Wyoming Advisory Mapping Committee.

Topographic maps, in either the 7½-minute quadrangle series or the 15-minute quadrangle series, have been published for about 47 percent of the State. An area of about 19,500 square miles is currently being mapped. When all mapping now underway is complete, about 67 percent of the State will be covered by modern topographic maps. The long-range plan provides for complete mapping of Wyoming by 1976.

Most of the present topographic surveys are fairly well distributed over the State. These surveys will provide the basic data essential for the exploration and investigation of minerals and fossil fuels in the Upper Colorado River Basin, the Shoshone and Powder River Basins, the potentially oil-bearing Green River Basin, and the water resources of the Upper Platte River Basin.

Mineral and Leasing

The Geological Survey is engaged in an extensive geologic mapping and mineral land classification program involving minerals that are subject to lease by the Federal Government, primarily coal in the Oregon Butte area and in part of the Carbon and Northern Laramie coal basins. Phosphate and oil shale resources are also being investigated.

The Geological Survey supervises nearly 37,000 oil and gas leases covering nearly 20 million acres of public, acquired, and Indian lands in Wyoming. The value of annual production from these leases is about $250 million, and annual royalty returns to the public treasury are approximately $31 million. The Geological Survey also supervises exploration, development, and production of all minerals except oil and gas on Federal and Indian lands.

A tabulation of developed and undeveloped waterpower sites in Wyoming was recently completed by the Geological Survey.

Information on the various geologic and topographic maps, mineral resources maps, water resources reports, and other Geological Survey publications relating to Wyoming can be obtained by writing the Director, Geological Survey, Department of the Interior, Washington, D.C., 20240.

Forest Service

The Forest Service of the U.S. Department of Agriculture administers 9,143,815 acres of national forest and national grasslands in Wyoming situated primarily in the high mountainous areas of the State.

The Forest Service also cooperates with the Wyoming State Forester in programs for the management and protection of State and private forest and range land, and engages in research activities through the Rocky Mountain Forest and Range Experiment Station with headquarters at Fort Collins, Colo. Additional Forest Service research projects in Wyoming are headquartered at the University of Wyoming at Laramie.

Multiple-Use Management

National forests are managed by the Forest Service to yield full and varied benefits. They provide valuable timber, grazing land, recreation opportunities, wildlife habitat, and watershed protection. In a recent year, more than 78 million board feet of timber was harvested from Wyoming's National Forests, which along with the grasslands also provide grazing under paid permit for over 124,000 cattle and horses, and over 354,000 sheep and goats. Nearly 4 million visitors came to the national forests in Wyoming to camp, picnic, ski, hunt, and enjoy other outdoor recreational pursuits.

In Wyoming, these plans include planting trees on 26,000 acres; constructing 650 campgrounds, picnic sites, and related recreation facilities; revegetating 250,880 acres of rangeland; controlling erosion on 69,000 acres; building 60 service buidlings, lookouts, and special structures and constructing 1,948 miles of multipurpose roads and 549 miles of trails.

In Wyoming 3,275,000 acres of State and private woodland are under organized forest fire protection financed jointly by the State and Federal Governments.

Research

The Rocky Mountain Forest and Range Experiment Station of the Forest Service, in cooperation with the University of Wyoming, operates a research-facility on the university campus at Laramie. Through this central installation, research work is conducted throughout Wyoming.

Near Dubois, in the Shoshone National Forest, a study is being made of sagebrush cover and its relation to snow accumulation, snowmelt, and subsequent water yield. Another project near Laramie and Cheyenne in the Medicine Bow National Forest examines snow accumulation at high elevations.

Other current research projects include management and rehabilitation of alpine and subalpine rangelands, and soil stabilization to control erosion.

Further information on activities of the Forest Service in Wyoming can be obtained by writing the following: Supervisor, Big Horn National Forest, Sheridan, Wyo., 82801; Supervisor, Medicine Bow National Forest, Laramie Wyo., 82070; Supervisor, Shoshone National Forest, Cody, Wyo. 82414; Supervisor, Bridger National Forest, Kemmerer, Wyo., 83101; Supervisor, Teton National Forest, Jackson, Wyo., 83001; Forest Range and Watershed Laboratory, University of Wyoming, University Station, Box 3354, Laramie, Wyo., 82070.

U.S. Army Corps of Engineers

The U.S. Army Corps of Engineers, in addition to its military construction responsibilities, plans and builds projects in a long-range program to develop the water resources of Wyoming. As directed by Congress, the Corps conducts studies of regions or river basins to develop comprehensive plans for flood control, navigation, irrigation, hydroelectric power, water supply, pollution abatement, and recreation.

In Wyoming, the Corps of Engineers has completed emergency-type projects and performed some snagging and clearing work on streams. Three local flood-protection projects were authorized for construction by the Flood Control Act of 1950—the Jackson Hole project on the Snake River, Greybull on the Big Horn River, and Sheridan on Goose and Little Goose Creeks.

The Greybull project, since its completion in 1959, has prevented flood damages estimated at almost three times its cost. The Jackson Hole project is designed to provide protection for about 12,000 acres of agricultural land, most of which has been flooded regularly. Sheridan project protects an area that previously could expect substantial flooding on an average of once every 3 years.

The Corps is also responsible for determining flood control capacities in Federal reservoirs included in the Missouri River Basin plan. The Corps studies the reservoirs completed, underway, and planned by the Department of the Interior's Bureau of Reclamation to determine whether flood control storage capacity should be included as a multipurpose feature. Flood plain areas in Wyoming benefit from such flood control storage capacity provided in Reclamation's Keyhole, Boysen, Glendo, and Jackson Lake Reservoirs. The Corps actively cooperates with State agencies, the Departments of Interior and Agriculture and other Federal agencies to obtain the best solution for flood and other water resource problems in the Missouri River Basin.

As of January 1963, some 36 dam and reservoir projects had been placed in operation by the Corps and the Bureau of Reclamation, and the Corps had completed 34 local flood protection projects and had 13 others under construction. In addition, the Corps had completed 250 miles of agricultural levees along the Missouri River.

Emergency operations of the Corps of Engineers include rescue work during floods and other emergencies; repair and strengthening of levees and other flood control works threatened or damaged by floods; and installation of control works where stream erosion threatens destruction of highways or other public works.

The Corps is also directed by Congress to conduct surveys on water resource problems when a locality requests such assistance. In Wyoming, surveys of flood problems are underway on the Green River and its tributaries, the Bear River Basin, and the Snake River Basin.

Further details on programs are available in a brochure, "Water Resources Development

by the U.S. Army Corps of Engineers in Wyoming," which may be obtained by writing the Division Engineer, U.S. Army Engineer Division, Missouri River, 7401 U.S. Post Office & Court House, 215 North 17th Street, Omaha, Nebr., 68102.

Soil Conservation Service

In Wyoming, the Soil Conservation Service (SCS) of the U.S. Department of Agriculture assists private land owners and organized farm groups in the conservation, effective use, and development of their land and water resources. This is done through soil and water conservation districts, small watershed projects, the Great Plains Conservation program, the National Cooperative Soil Survey, and snow surveys.

SCS channels most of its technical assistance through 45 soil and water conservation districts that cover more than 75 percent of Wyoming. The districts are legal subdivisions of the State governed by locally elected landowners. SCS assists cooperators in the districts to develop and carry out conservation plans for their land. An acre-by-acre survey provides the cooperator with information upon which he can base his plans. The survey indicates alternative uses for each tract and the conservation treatment necessary for the uses selected by the cooperator.

Soil surveys made by SCS and cooperating local and State agencies provide information interpreted in such terms as land capability, range sites, and woodland suitability. They also help to point out potential problem areas and are used by municipalities, counties, and planning officials who guide urban expansion, housing developments, and construction of schools and roads.

Farmers and ranchers in nine counties in the eastern half of Wyoming are eligible for assistance through long-term contracts authorized by the Great Plains conservation program. Participants receive cost-sharing and technical assistance over 3- to-10-year periods to accelerate the installation of soil and water conservation systems tailormade to combat drought and wind conditions of the Great Plains. In Wyoming about 25 percent of the cropland in the program is unsuited to cultivation and is being converted to other uses.

Small watershed projects are undertaken in Wyoming under the Watershed Protection and Flood Prevention Act of 1954 and its amendments. They are initiated and carried out by local groups—mainly soil and water conservation districts—which pay part of the cost. The projects combine land treatment on individual farms and ranches with flood prevention dams and other structural measures. Projects are designed to reduce floodwater and sediment damage to agricultural and urban land, roads, bridges, and irrigation canals. They also offer opportunity to develop municipal and agricultural water supply, fish and wildlife habitats, and recreational facilities.

In Wyoming, the SCS, in cooperation with private concerns and other Federal, State, and local agencies, makes and coordinates snow surveys in the mountains during the winter. The surveys furnish key data for water supply forecasts which are made available in the spring to State and municipal governments, private industries, farmers, and other water users who rely on them in planning their operations for the coming season.

Additional information about land and water resource development on private land can be obtained from local soil and water conservation districts or from the State office of the Soil Conservation Service, Tip Top Building, Casper, Wyo., 82601.

Water from the Buffalo Bill Reservoir nearby supplies water to this field through a contour ditch irrigation system designed by Soil Conservation technicians.

Federal Water Pollution Control Administration

Water pollution control is an administrative function of the Federal Water Pollution Control Administration, Department of the Interior. A program conducted cooperatively with other resource agencies, at all levels, recognizes the State as primarily responsible for controlling water pollution. In general, the Federal role is one of long-range planning, research and training, enforcement, and technical and financial aid to States and localities. The program seeks to protect waters for public supply, propagation of fish and wildlife, recreation, agriculture, and industry.

Since 1957, Federal grants have helped Wyoming to maintain water pollution control programs and currently make up about one-third of annual State expenditure for this purpose. At present, Federal grants are assisting Wyoming to review, approve design, and maintain surveillance to assure efficient operation of municipal and industrial waste treatment facilities; to plan sanitation for recreational areas, and sewer extension to outlying rural areas around towns and cities.

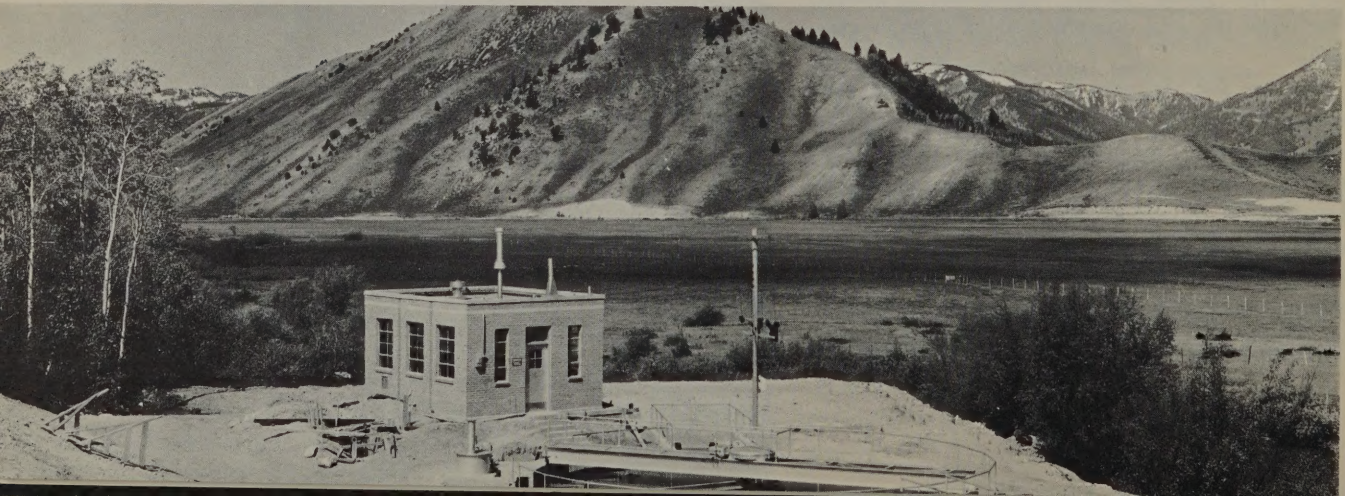
A well-known feature of the Federal program is the awarding of incentive grants to aid construction of municipal sewage-treatment plants. During the past few years, the Accelerated Public Works Act has also provided funds for this purpose. From both sources, Wyoming's towns and cities have received about $2 million in Federal aid to help build 53 sewage treatment plants. At a total cost of nearly $7 million, these projects represent sizable expenditures of local funds.

Long-range comprehensive planning for water quality management is the No. 1 aim of the Federal Water Pollution Act. Such programs are planned regionally or for a whole river basin and are aimed at permitting the use and reuse of our water resources many times over. The Columbia River Basin comprehensive project, which includes the Jackson Lake area of Wyoming, is one of eight studies underway. Eventually, a comprehensive study will be made of the entire Colorado River Basin, which includes about 20 percent of Wyoming.

Federal law provides enforcement procedures under which the Government can take action to abate pollution. The law fully recognizes the basic principle of Federal-State-local cooperation. In none of the Federal enforcement actions involving Wyoming has it been necessary to proceed to public hearings and court action. All Federal establishments are required by law to cooperate in prevention and control of water pollution. Abatement and control of pollution originating at Federal installations is undertaken by the Federal Water Pollution Control Administration in cooperation with Wyoming's State Department of Public Health.

Further information on the Federal Water Pollution Control Administration can be obtained by writing to Public Health Service, Region VIII, Room 551, 621 17th Street, Denver, Colo., 80202.

Most Wyoming communities have treatment facilities to prevent pollution of streams by municipal wastes. More than 50 towns and cities have received Federal grants totaling nearly $2 million to build such facilities.



The Future

In the words of the popularly accepted State song, Wyoming is young, strong, and growing. Not long ago, the State was entirely wilderness, but in this region of peaks and plains, the land was rich and responsive. Growth in population, cities, agriculture, and industry began as the people of Wyoming discovered their plentiful natural resources. For progress, Wyoming owes a debt to the land—its minerals, forage, wildlife, fish, forest, water, and scenic beauty.

Wyoming today reflects the land consciousness of its people. In building a modern State, the people have conscientiously used the gifts which nature entrusted to them. They have preserved scenic surroundings so that future generations will know the pleasures of the outdoors. Wisely developing and managing their resources, they strive to assure an expanding economy. Conservation of the resources of land and water means sound, continuing growth.

The natural resource agencies of the Federal Government contribute to Wyoming's growth. Their efforts, in cooperation with State and local agencies, will continue in years to come.

"There's a growing, splendid State that lies above
On the breast of this great land;
Where the massive Rockies stand,
*There's Wyoming young and strong * * * "*

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Acknowledgments

The Department of the Interior gratefully acknowledges the cooperation of the following in supplying illustrations for this publication:

Soil Conservation Service, U.S. Department of Agriculture, pp. 29, 40, 42 (bottom), 77, 78; National Geographic Society, pp. 3, 18, 38, 41 (top), 46, 50, inside back cover; Pacific Power and Light Co., p. 32; Union Pacific Railroad, pp. 12, 23, 24, 25, 26, 33, 42 (top), 47 (bottom right), 57, 60, 62; University of Wyoming Agricultural Information, p. 29 (bottom); Wyoming Department of Game and Fish, p. 46; Wyoming Travel Commission, pp. 2, 4, 5, 6, 7, 9, 10, 11, 16, 17 (bottom), 19, 20, 21, 37 (bottom), 41 (bottom), 43 (bottom), 44, 47 (top right), 51 (bottom left, center), 55, 72, 74. All other photographs by the Department of the Interior.

The Department also expresses its appreciation to the Corps of Engineers, U.S. Department of the Army, Soil Conservation Service, U.S. Department of Agriculture, Forest Service, U.S. Department of Agriculture for assisting with the text.

Some Other Interior Department Publications of Special Interest

Natural Resource booklet series, states: Nevada, $.45; Massachusetts, $.45; Colorado, $.50; Arizona, $.45; Oregon, $.50; Ohio, $.45; Montana, $.50; Washington, $.50; New Mexico, $.50; West Virginia, $.45; Idaho, $.50; Utah, $.45; Texas, $.45; California, $.60. "The Race for Inner Space," $.55; "Quest for Quality," (in full color) $1.00; "The Population Challenge," (in full color) $1.25; "Reclamation Era," (published quarterly) subscription rates, $.50 a year. "Federal Assistance in Outdoor Recreation," $.20; 1963 Minerals Yearbooks—Vol. 1, Metals and Minerals (Except Fuels), $4.50; Vol. 2, Fuels, $2.50; Vol. 3, Area Report: Domestic, $4.25; U.S. Wall Map, $2.00; "Our Public Lands," (quarterly magazine), $.60 annually; "Wildlife on the Public Lands," (in full color) $.35; Waterfowl Tomorrow, $4.00; Attracting Birds, $.15; Shrimp Tips, $.25; Take a can of Salmon, $.25; "Vacationing With Indians," $.30; "American Indian Calendar," $.20; "Indian Affairs—A Progress Report," $.15; Answers to Questions about the American Indian, $.20; Colonials and Patriots, $2.75; Parks for America, $5.25; Geology of Mt. Rainier National Park, $1.75; A Primer on Water, $.35; A Primer on Ground Water, $.25; "Lake Powell, Jewel of the Colorado," (in full color) $.75.

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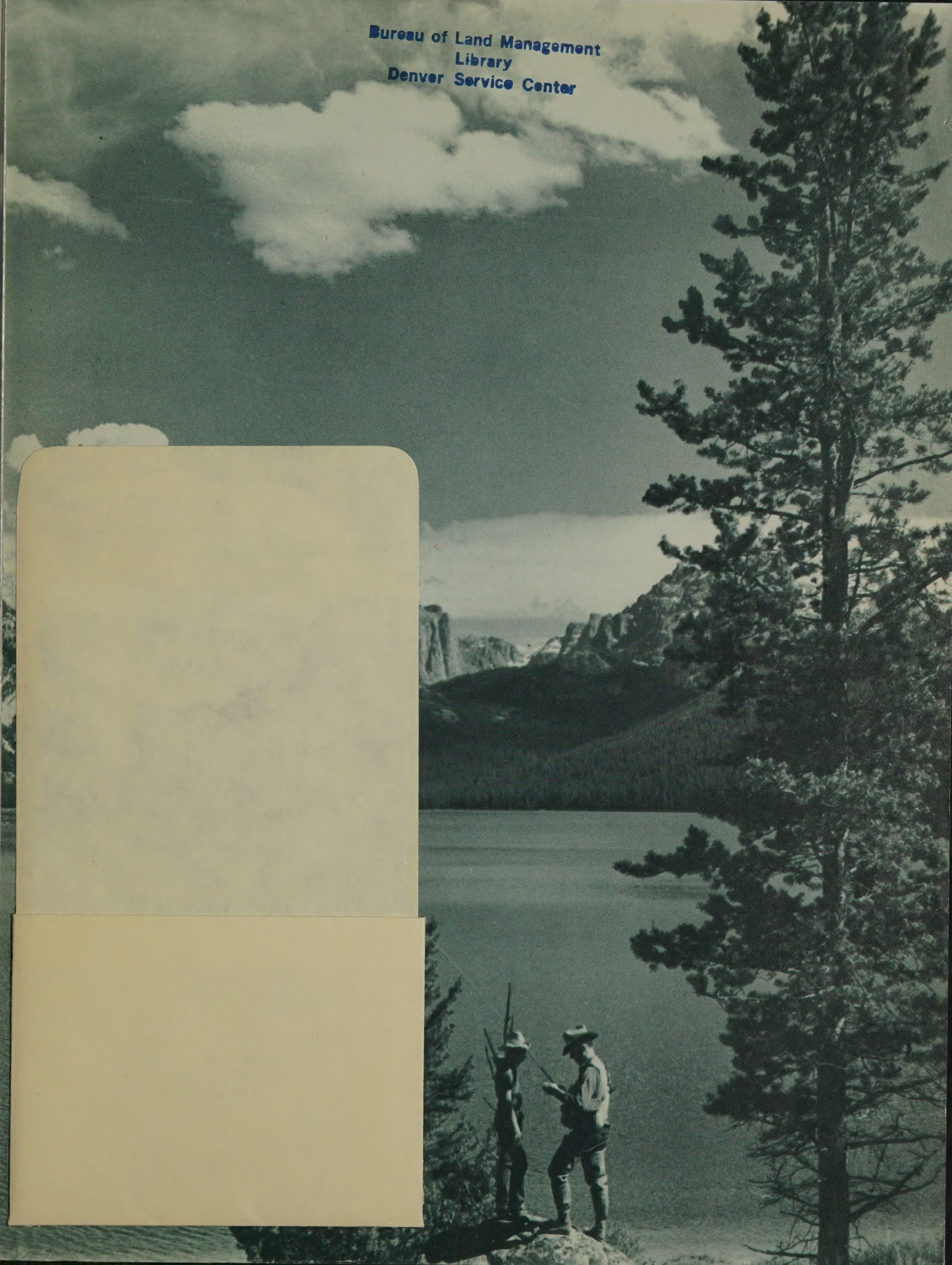

GREAT SEAL OF THE STATE OF WYOMING

Created in 1849, the Department of the Interior—a Department of Conservation—is concerned with the management, conservation, and development of the Nation's water, fish, wildlife, mineral, forest, and park and recreational resources. It also has major responsibilities for Indian and Territorial affairs.

As the Nation's principal conservation agency, the Department works to assure that nonrenewable resources are developed and used wisely, that park and recreational resources are conserved for the future, and that renewable resources make their full contribution to the progress, prosperity, and security of the United States—now and in the future.

March 3, 1849